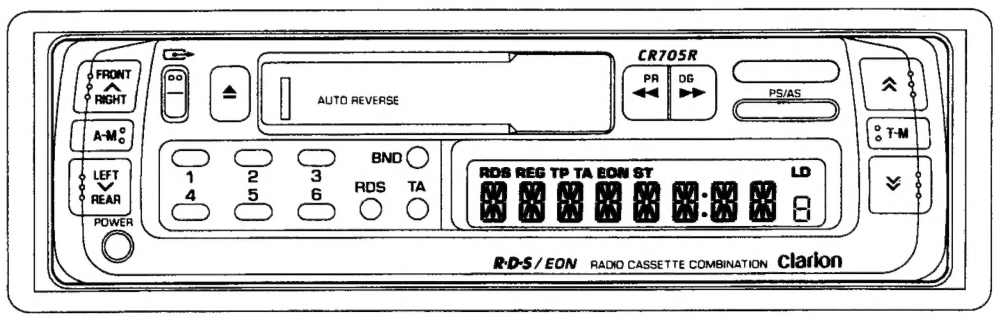
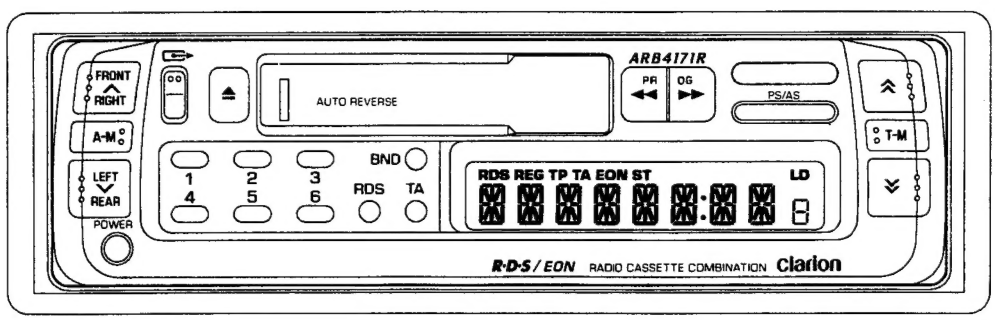
Clarion Co., Ltd. Export Division-22-3, Shibuya 2-chome. Shibuya-Ku Tokyo, 150 Japan Tel: 03-3400-1121 . Fax: 03-3400-8679 Telex: J22908, J22152
Service Dept-50 Kamitoda, Toda-Shi, Saitama, 335 Japan Tel: 0484-43-1111 Telex: J2962628 CLAFAC-J

Clarion Service Manual

Published by Service Administration Section



Model CR705R (PE-9963E-E)



Model ARB4171R (PE-9963E-C) (PE-9963E-D)

Printed by: Schaltungsdienst Lange, Berlin (Germany)

■ SPECIFICATION:

RADIO SECTION

Tuning System: ..... PLL synthesizer tuner
Receiving Frequencies: ..... FM:87.5 to 108 MHz(0.05 MHz steps)
MW:531 to 1,602 kHz(9 kHz steps)
LW:153 to 279 kHz(1 kHz steps)

TAPE DECK SECTION

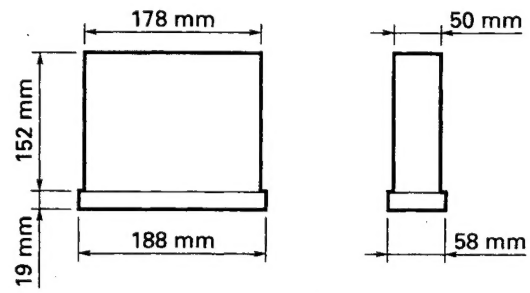
Playback System: ..... Auto Reversing, 4-track, 2-channel stereo cassette tape playback
Monaural also possible

GENERAL

Power Supply Voltage: ..... DC 14 V (10.8 to 15.6 V allowable), negative ground
Power Consumption: ..... Lass than 10 A
Speaker Impedance: ..... 4 (4 to 8 allowable)
Auto Antenna Rated Current: ..... 0.5 A or less

Weight: ..... **1.3 kg**

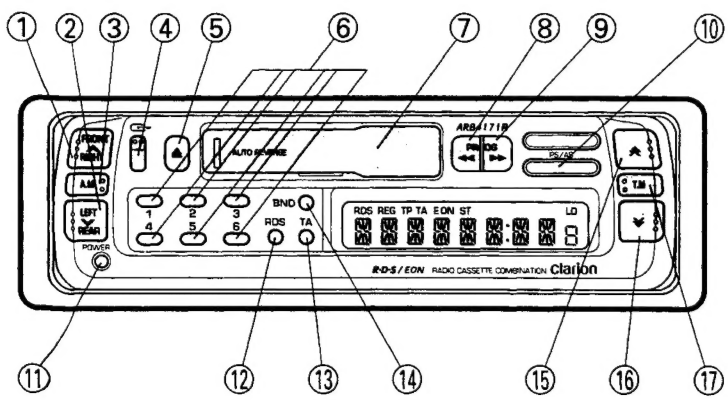
Dimensions



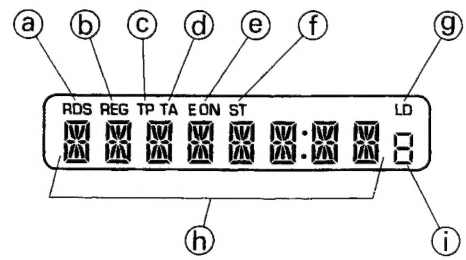
Note:

- Short-circuiting the power antenna terminal or using a power antenna with a current exceeding the rated current can damage internal circuits. Always use with the rated current.
- Specifications and the design are subject to change without notice for further improvement.

■ OPERATION:



■ DISPLAY



1. Controlling the Sound & General Operation

CAUTION!

Turning the ignition on or turning the POWER button on with the volume control at the maximum position can damage your ears.

✱ **POWER Button** ☛ ⑪

✱ **Audio Mode (A-M)/Loudness Selector Button** ☛ ③
Press the button ③ , to select the adjustment mode. The adjustment mode changes in the following order.

VOL—>BASS—>TREB—>BAL—>FAD—>VOL

- **Loudness ON/OFF**
  When you press the button ③ for more than 2 seconds, loudness is turned on, and the **"LD"** indicator ⓖ lights up. To turn loudness off, press the button again for more than 2 seconds.

✱ **Audio Control Up Button** ☛ ①
✱ **Audio Control Down Button** ☛ ②

■ Audio Mode Indications and Description of Operation

Audio Control Up/Down Buttons / Audio Mode		Centre Position	
VOL volume adjustment	VOL 00	VOL 07 **Note 3** (initial setting)	VOL 33
BASS bass adjustment	BASS -7 (negative indication)	BASS 0	BASS +7
TREB treble adjustment	TREB -7 (negative indication)	TREB 0	TREB +7
BAL left/right balance adjustment	BAL L15 (Balance Left)	BAL 00	BAL R15 (Balance Right)
FAD front/rear balance adjustment	FAD R15 (Fader Rear)	FAD 00	FAD F15 (Fader Front)

Note 1: In the balance and fader adjustment modes, the actual steps and the steps indicated on the display do not match due to the large number of steps.
Note 2: The original display reappears approximately 5 seconds after the adjustments in the various audio modes.
Note 3: The various modes are set to the following values when the power is first turned on after the set is installed in the car: VOL 07, BASS 0, TREB 0, BAL 00 and FAD 00.

2. Listening to the Radio

✱ **Band Selection Button** ☛ ⑭
When you press button ⑭, the reception band changes in the following order:
U1—>U2—>MW/LW—>U1
(U1 and U2 are on the same reception frequency band.)

✱ **Tuning Mode Selector Button (T-M)** ☛ ⑰
Press the button ⑰ so that **"MAN"** appears on the display. The manual tuning mode is now set. Tune into a station by pressing button ⑮ or button ⑯. Unless you press button ⑮ or button ⑯ within 5 seconds of switching to the manual tuning mode, the unit will return to the seek tuning mode.

- **Manual Tuning**
  During FM reception, the frequency changes in steps of 0.05 MHz. On MW, it changes in steps of 9 kHz, and on LW, in steps of 1 kHz.
  1. Press the button ⑰ to set the manual tuning mode.
  2. When you press button ⑮, the frequency increases, and when you press button ⑯, it decreases.

- **Seek Tuning (Local/DX)**
  There are two sensitivity levels for seek tuning: DX seek, which will tune in any broadcasting stations which can be received, and Local seek, where only those stations with a sufficiently strong signal, i.e. local stations, can be tuned in.
  <DX Seek>
  1. Press button ⑰ for more than 2 seconds. **"DX"** appears on the display then turns off.
  2. Press button ⑮ to tune toward higher frequencies and press button ⑯ to tune toward lower frequencies. Tuning will stop when a broadcast station is received.

  <Local Seek>
  1. Press button ⑰ for more than 2 seconds. **"LO"** appears on the display then turns off.
  2. Press button ⑮ to move to higher frequencies, button ⑯ to move to lower frequencies. Tuning stops at a station with good reception.

✱ **Preset Buttons 1, 2, 3, 4, 5 and 6** ☛ ⑥
By pressing a Preset button you can instantly recall a station which has been stored in memory.

★ When calling a broadcasting station, unless you release the Preset button within 2 seconds, the displayed frequency will be stored at the Preset button, so be careful.

✱ **Storing Stations in the Preset Memory**
6 radio stations can be stored in memory for each band.
1. Press button ⑭ to select the reception band.
2. Press button ⑩ for more than 2 seconds to store stations automatically in the memory (Auto Store). If less than 6 stations are stored in this process, or if you want to store a broadcasting station with a weak signal, carry out the following steps.
3. Tune in the broadcasting station using Manual Tuning.
4. Press the desired Preset button for more than 2 seconds. The sound will go off when you press the button, and when it comes on again, the station has been stored.

✱ **Preset Scan/Auto Store Memory Button** ☛ ⑩

- **Preset Scan**
  Press button ⑩. The broadcasting stations stored at Preset buttons 1 to 6 will be received in order for 5 seconds each.
  When you press button ⑩ again, or press one of the Preset buttons 1 to 6, this mode will be released. (When the unit is receiving on FM, all the stations stored in U1 and U2 will be received in order.)
  ★ If you press button ⑩ for more than 2 seconds, the Auto Store memory mode will become operative. All the stations stored in the memory so far will be cleared, and new ones will be stored instead, so be careful.

- **Auto Store Memory**
  6 strong-signal broadcasting stations can be stored automatically for each band. (See "Storing Stations in the Preset Memory".)
  ★ Stations previously stored in the preset memory are cleared when new ones are stored using Auto Store.

✱ **Stereo Reception Indicator**
When a stereo broadcast is received, the **"ST"** indicator ⓕ lights up.

3. RDS(Radio Data System) Operation

✱ **RDS Button** ☛ ⑫
Set the RDS mode by pressing the button ⑫, so the **"RDS"** indicator ⓐ lights up. When you press the button again, this mode is released.
1. When an RDS station is received, the programme name is displayed. (PS:Programme Service Name)
2. If an emergency broadcast is received while an RDS station is being received, **"ALARM"** is displayed. The volume of the emergency broadcast is automatically set at the pre-set value.
3. If good reception of the RDS broadcast becomes impossible in your present location, the **"RDS"** indicator ⓐ starts blinking.
4. When seek tuning is carried out in the RDS mode, only stations broadcasting an RDS signal will be received.
5. ● **Preset Scan in RDS Mode**
   When you press the button ⑩, Preset Scan will be carried out only on the RDS stations among the preset stations.

   ● **Auto Store in RDS Mode**
   When you press the button ⑩ for more than 2 seconds, only RDS stations will be stored on the Preset buttons.

✱ **Same-Programme Search**

(PI: Programme Identification)
Press the button 6 on which an RDS station has been stored, and if this station is not received (the **"RDS"** indicator ⓐ is blinking), press the same button again, **"SEARCH"** will be displayed and a station broadc asting the same programme will be received.

✱ **Regional Programme Function (REG)**

REG ON (REG indicator lit):
Only local (regional) radio broadcasts in the local area will be sought.
REG OFF (REG indicator off):
If you are receiving a regional station in a certain area and you enter a different area, the regional station for that area will be received. In the RDS mode, the REG function will turn on/off each time you press the button ⑫ for more than 2 seconds.

✱ **RDS EON (Enhanced Other Networks Information)**
When EON data is received for an RDS broadcast, the **"EON"** indicator ⓔ will light up.

1. If you are waiting to receive traffic information, and the **"EON"** indicator lights up, traffic information will be broadcast when the traffic information begins, even if it is on a different station to the one you are currently receiving.
2. When the **"EON"** indicator is lit, if you press a button ⑥ , the station with the best signal in that area will be received instantly.

★ Certain countries and certain stations do not transmit EON dats.

✱ **TA (Traffic Announcement) Button** ☛ ⑬
When traffic information begins, this is given top listening priority.
When you press the button ⑬ , the **"TA"** indicator ⓓ lights up, and a traffic information station is sought If such a station is found, the **"TP"** indicator ⓒ lights up, and the traffic information wait state becomes operative. When you press the button ⑬ again, this state is released.
If you press the button ⑬ while listening to traffic information, the traffic information broadcast is cancelled and the traffic information wait state becomes operative again.
If no traffic information station is found, **"NO TRA"** is displayed, so you then press the button ⑬ to release the state. Traffic Information is automatically reproduced at the preset volume.

1. When the traffic information begins, **"TRA INFO"** is displayed.
2. While you are listening to traffic information, loudness is turned OFF.
3. Even if the **"TA"** indicator ⓓ is lit, when a station not broadcasting traffic information is being received, a traffic information station will be sought when you press the button ⑬ .
4. ● Preset Scan when **"TA"** Indicator ⓓ is Lit:
When you press the button ⑩ , only stations broadcasting traffic information will be covered by the Preset Scan.
● Auto Store when **"TA"** indicator ⓓ is Lit:
If you press the button ⑩ for more than 2 seconds, only stations broadcasting traffic information will be auto stored.

✱ **Traffic Information and Emergency Broadcast Volume Setting Method**
1. Press the button ⑬ for more than 2 seconds.
2. Adjust the volume using the buttons ① and ②
3. If you press any button other than ① , ② or ③ , and take no other action for 5 seconds, the previous state will become operative again.

4. Listening to Cassette Tapes

✱ **Cassette Tape Playback**
Insert the cassette tape horizontally so that the side where the tape can be seen is on the right.

✱ **Eject Button** ☛ ⑤
When you press button ⑤ , the cassette tape is ejected.

✱ **Fast Forward and Rewind/Programme Selector Buttons** ☛ ⑧ , ⑨
● **Using Fast Forward/Rewind**
1. During top side playback (playback direction is toward the right):
Fast forward: Press button ⑨ until it locks
Rewind: Press button ⑧ until it locks
2. During bottom side playback (playback direction is toward the left):
Fast forward: Press button ⑧ until it locks
Rewind: Press button ⑨ until it locks.
3. Release
Press the opposite button-either ⑧ or ⑨

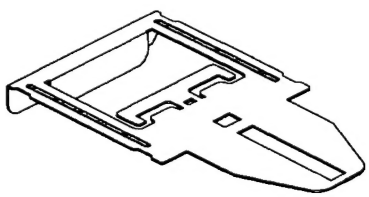
● **Changing the Programme (Running Direction)**
When you press buttons ⑧ and ⑨ simultaneously, the tape playback direction will change.

■ FEATURES:

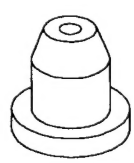
TUNER
■ RDS (Radio Data System): PI(Programme Identification), AF (Alternative Frequency), TP (Traffic Programme Identification), TA (Traffic Announcement), PS(Programme Service Name), REG(Regional Selection), EON(Enhanced Other Networks). ■ Electronic Quartz-Locked PLL Tuning ■ One-Touch Memory (12 FM, 6 MW/LW) ■ Tuning Modes: Manual Tuning and Station Seek in both directions ■ Preset Scan (PS) & Auto Store (AS) on FM/MW/LW ■ DX/Local Switch ■ Super SASC II(Signal Actuated Stereo Control) & CZ1 Noise Cancellor ■ Adjustable TA Level
TAPE SECTION
■ Electronic Servo Motor ■ Hard Permalloy Head ■ Illuminated Tape Door
AUDIO SECTION
■ Loudness, Fader, Bass / Trable Controls ■ Maximum Power Output: 4x7 W
GENERAL
■ Power Antenna Activator ■ Multi-Mode LCD Display ■ Fully Detachable Control Panel ■ DIN Chassis

■ COMPONENT VIEW:

MAIN UNIT		
921-9257-00	PART'S BAG	1



HOOK PLATE
330-8216-01



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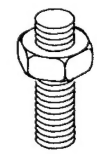


SPECIAL. SC
716-0726-01

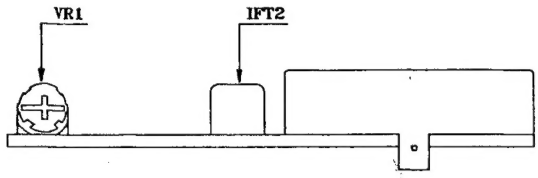
■ ADJUSTMENTS:

• FM Circuit (TUNER PACK)

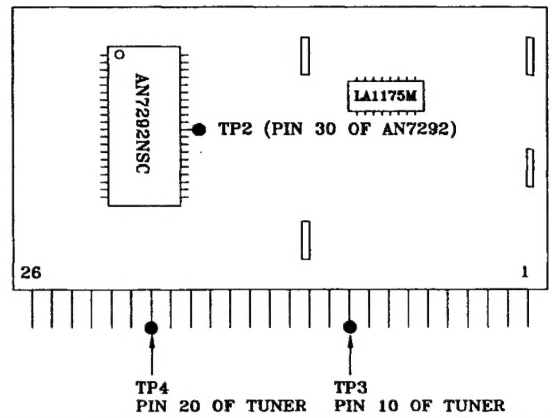
ITEM	TEST-POINT	PROCEDURE
OV	IFT2	1.CONNECT THE DIGITAL VOLT-METER TO TP2 AND TP3. 2.INPUT THE 98.1MHZ/65dB SIGNAL (NO MOD.),AND ADJUST THE READING OF DIGITAL VOLT-METER TO 0±30mV BY IFT2.
S-METER	VR1	1.CONNECT THE DIGITAL VOLT-METER TO TP4. 2.INPUT THE 98.1MHZ/30dB SIGNAL (NO MOD.) 3.ADJUST THE LEVEL TO 2.4±0.1V BY VR1.

ADJUSTMENT POINT/TEST POINT

TOP VIEW



BOTTOM VIEW



• AM Circuit (TUNER PACK)

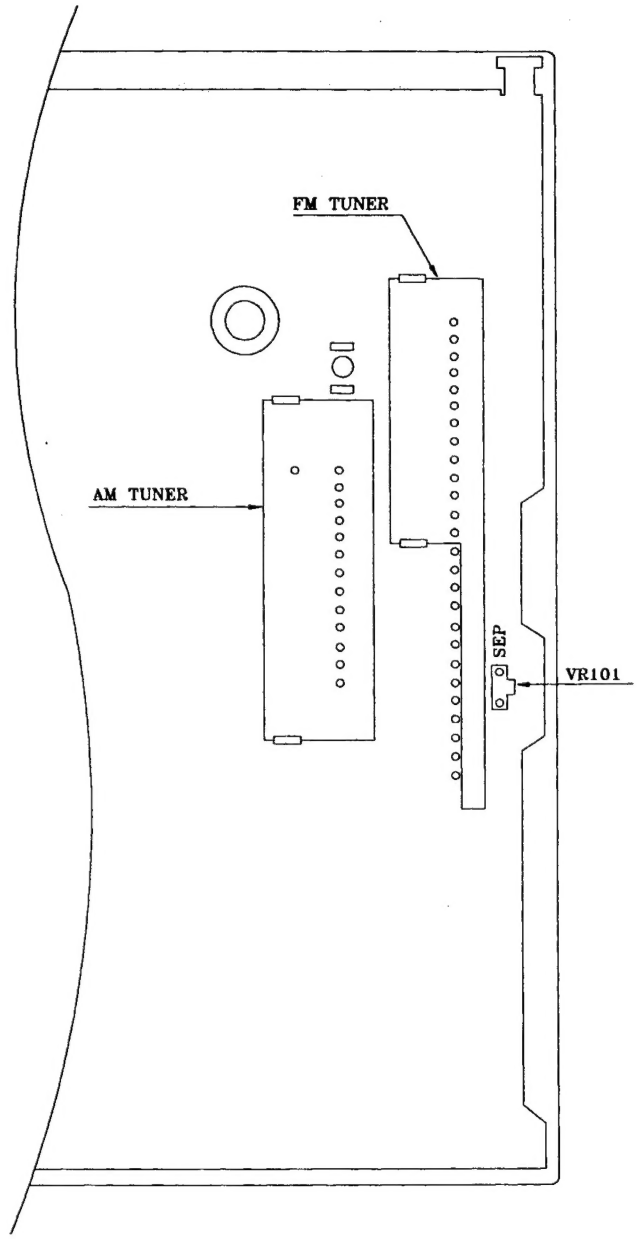
ITEM	TEST-POINT	PROCEDURE
● IF ● TRACKING	PRE-ADJUSTED TUNER	

• MAIN PWB

ITEM	TEST-POINT	PROCEDURE
FM SEPARATION	VR101	1.INPUT THE 98.1MHz, CONNECT THE OUTPUT OF A STEREO MODULATOR TO THE EXTERNAL MODULATION TERMINAL, AND INPUT A 65dB SIGNAL. 2.SET THE STEREO MODULATOR TO THE L OR R-ch AND ADJUST VR101 SO THAT THE MAXIMUM SEPARATION IS OBTAINED. (MORE THAN 20dB)

ADJUSTMENT POINT/TEST POINT

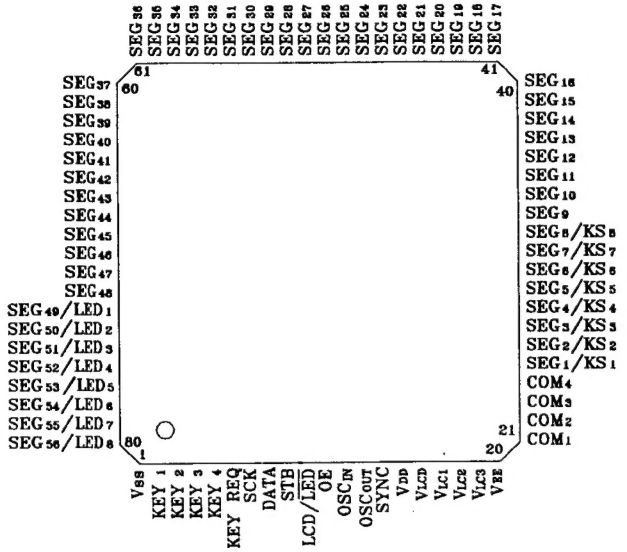
TOP VIEW



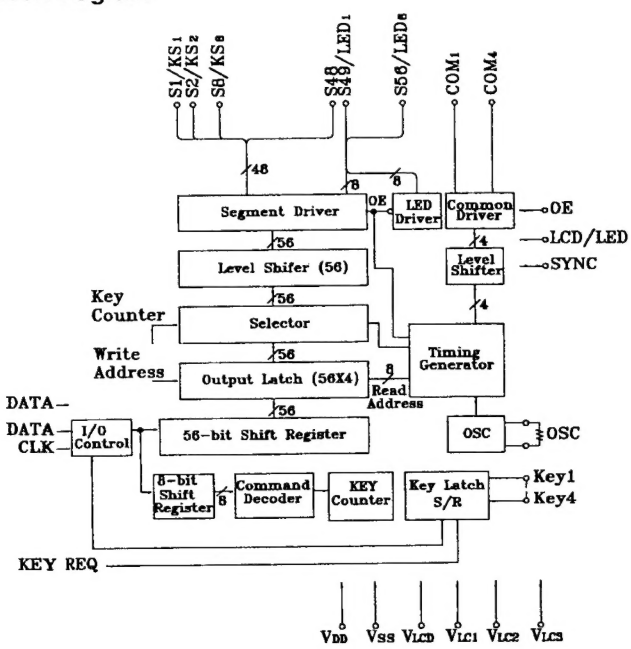
■ EXPLANATION OF IC's:

■ UPD1643G C-7ET 051-6001-0

Terminal Connection



Block Diagram

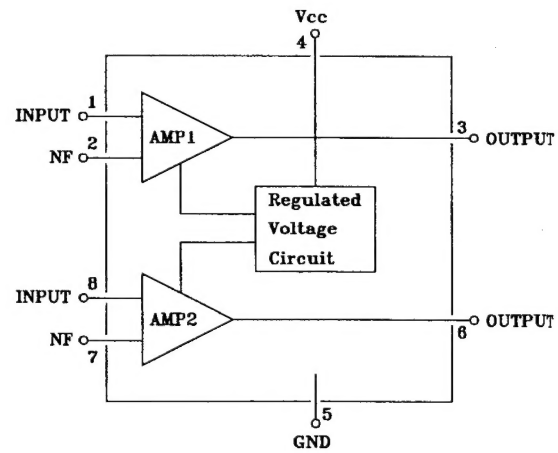


Terminal Description

Pin No.	Symbol	Function
01	VSS	Earth pin for internal logic and LED outputs.
02 ≀ 05	KEY1 ≀ KEY4	Pins for input of key data for key scan.
06	KEY REQ	Key request output pin. Goes "H" when one of the keys is pressed (key data "H").
07	SCK	Pin for input of data shift clock. Reads data at positive going and outputs data at negative going.
08	DATA	Pin for input/output of data. Inputs of commands and display data and outputs key data. The data is input from the significant bit at positive going of the shift clock and output from the significant bit at negative going of the shift clock. This pin is open drain during output.
09	STB	Pin for input of strobe signal. "L" enables data input. Command is processed at the positive going.
10	LCD/$\overline{\text{LED}}$	Pin for switching between LCD and LED. "H" makes SEGn/LEDn LCD segment outputs and "L" makes them LED driver outputs.
11	OE	Pin for input of Output Enable signal. "L" turns all segments and all LEDs off.
12 13	OSC IN OSC OUT	Connect the resistor of oscillator circuit.
14	SYNC	Pin for input/output of sync signal.
15	VDD	Internal logic power pin.
16	VLCD	LCD driver power pin.
17 18 19	VLC1 VLC2 VLC3	Dot matrix LCD drive power.
20	VEE	Earth pin for LCD drive.
21 ≀ 24	COM1 ≀ COM4	Pins for LCD common outputs.
25 ≀ 32	SEG1/KS1 ≀ SEG8/KS8	Pins commonly used for the LCD segment outputs and the key source outputs for key scanning.
33 ≀ 72	SEG9 ≀ SEG48	Pins for LCD segment outputs.
73 ≀ 80	SEG49/LED1 ≀ SEG56/LED8	Pins switchable between LCD segment outputs and $\overline{\text{LED}}$ outputs. Switching is based on the LCD/$\overline{\text{LED}}$ pin.

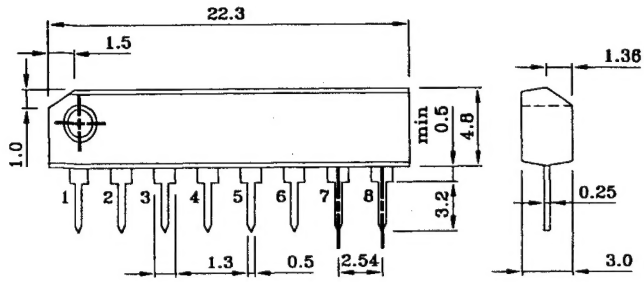
■ LA3161 051-0272-00

Block Diagram



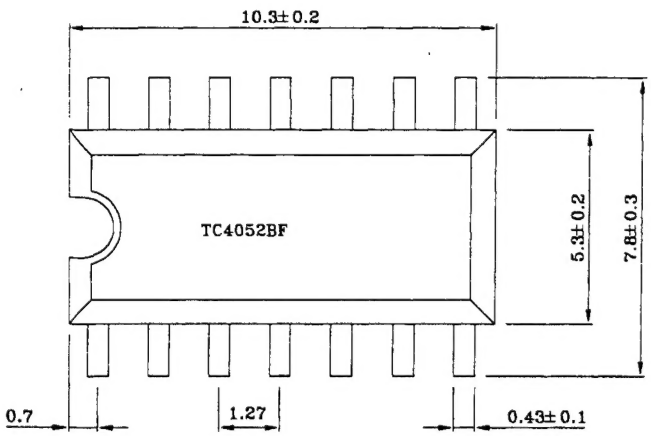
Outward Form

Case Outline 3016B-S8IC
(unit:mm)



■ TC4052BF(9959) 051-0410-05

Outward Form



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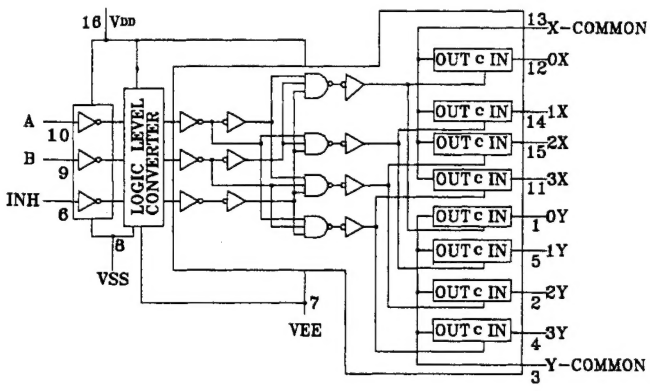
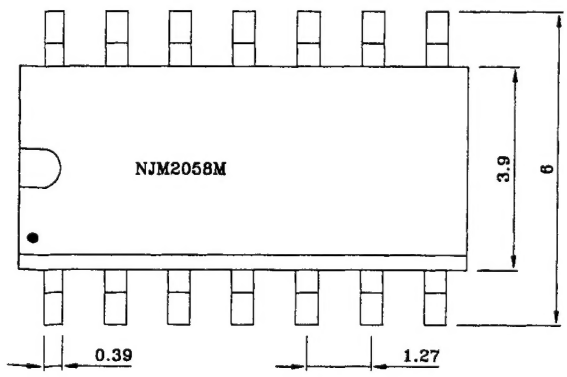


■ NJM2058M 051-0556-91

Outward Form



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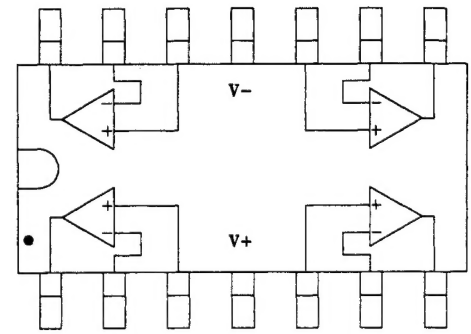
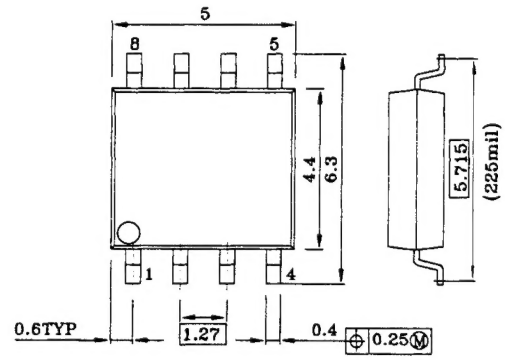


■ NJM2103M 051-0869-55

Outward Form



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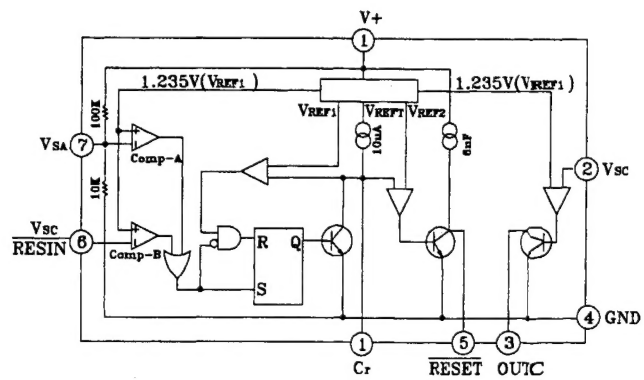
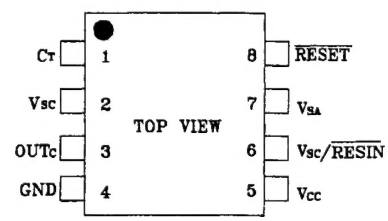
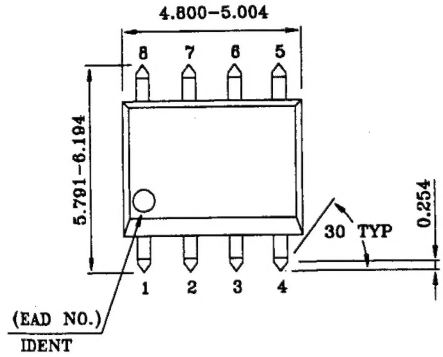


Terminal Connection

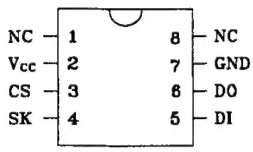


■ NM93C46TM 051-1375-35

Outward Form



Terminal Connection

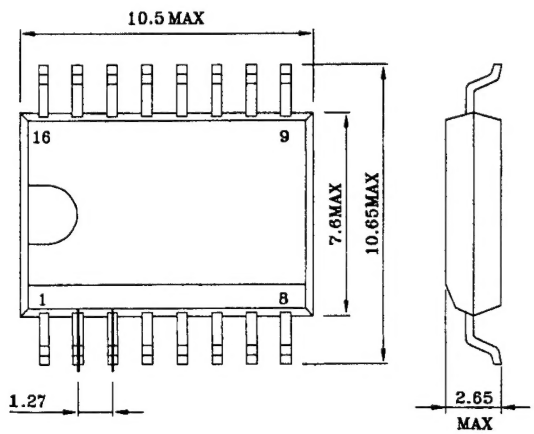


Pin Names

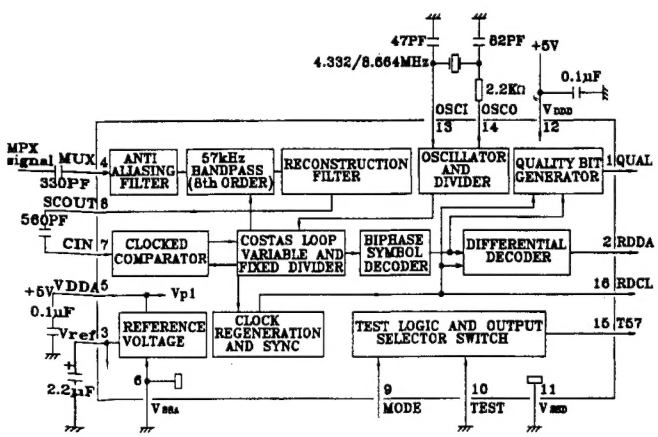
CS	Chip Select
SK	Serial Data Clock
DI	Serial Data Input
DO	Serial Data Output
GND	Ground
Vcc	Power Supply

■ SAA6579T 051-1819-00

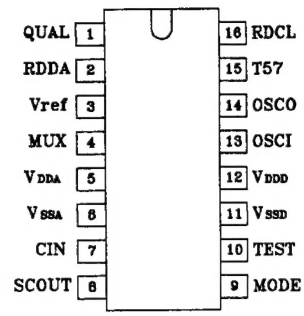
Outward Form



Block Diagram



Terminal Connection

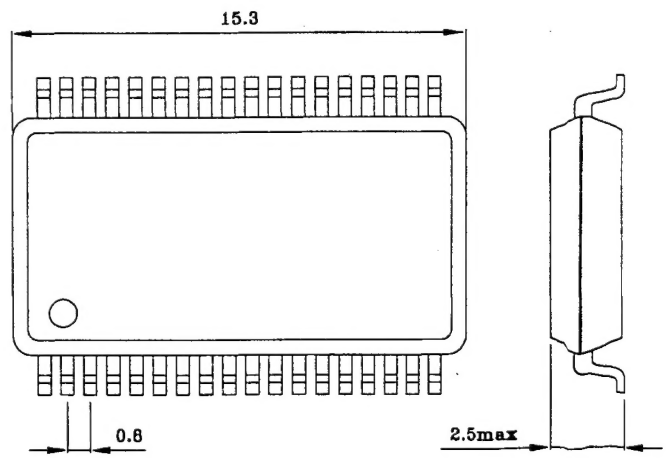


Terminal Description

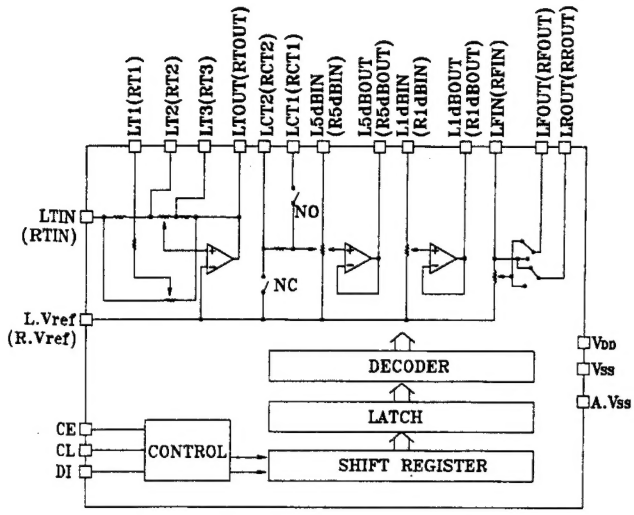
Pin No.	Symbol	Description
01	OUAL	Ouality indication output.
02	RDDA	RDS data output.
03	Vref	Reference voltage output (0.5VDDA).
04	MUX	Multiplex signal input.
05	VDDA	+5V supply voltage for analog part.
06	VSSA	Ground for analog part (0V).
07	CIN	Subcarrier input to comparator.
08	SCOUT	Subcarrier output of reconstruction filter.
09	MODE	Oscillator mode/test control input.
10	TEST	Test enable input.
11	VSSD	Ground for digital part (0V).
12	VDDD	+5V supply voltage for digital part.
13	OSCI	Oscillator input.
14	OSCO	Oscillator output.
15	T57	57KHz clock signal output.
16	RDCL	RDS clock output.

■ LC7538NM 051-5000-00

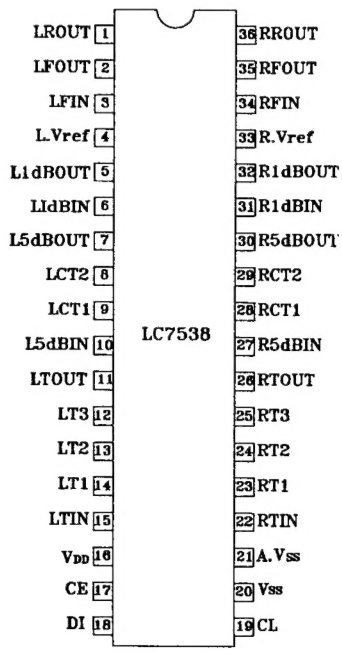
Outward Form



Block Diagram



Terminal Connection

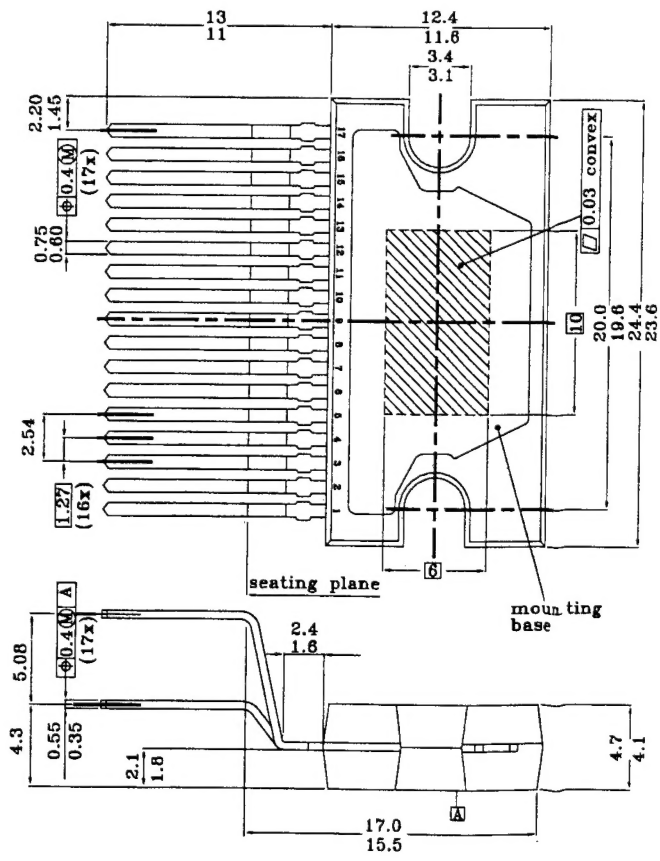


Terminal Description

Pin No.	Symbol	Function
01	LR OUT	Left rear channel output.(FADER adjust).
02	LF OUT	Left front channel output.(FADER adjust).
03	LF IN	Left channel input.(FADER adjust).
04	L.V ref	Left channel reference voltage.
05	L1dB out	Left channel volume 1dB control output.
06	L1dB IN	Left channel volume 1dB control input.
07	L5dB OUT	Left channel volume 5dB control output.
08	LC T 2	Left channel loudness control.
09	LC T 1	Left channel loudness Hi freguncy control.
10	L5dB IN	Left channel volume 5dB control input.
11	LT OUT	Left channel Tone control output.
12 13 14	LT 3 LT 2 LT 1	Left channel BASS capacitor (LT3,LT2). Left channel TREB capacitor (LT1,LT2).
15	LT IN	A terminal which left channel signal input.
16	VDD	Power supply terminal.
17	CE	Input the receives signal for chip enable.
18	DI	Input the serial data receives.
19	CL	Input the serial data receives clock.
20	VSS	GND terminal.
21	A,VSS	GND terminal (Audio system).
22	RT IN	A terminal wgich right channel signal input.
23 24 25	RT 1 RT 2 RT 3	Right channel BASS capacitor (RT3,RT2). Right channel TREB capacitor (RT1,RT2).
26	RT OUT	Right channel Tone control output.
27	R5dB IN	Right channel volume 5dB control input.
28	RC T 1	Right channel loudness Hi freguncy control.
29	RC T 2	Right channel loudness control.
30	R5dB OUT	Right channel volume 5dB control output.
31	R1dB IN	Right channel volume 1dB control input.
32	R1dB out	Right channel volume 1dB control output.
33	R.V ref	Which right channel reference voltage.
34	RF IN	Right channel input.(FADER adjust).
35	RF OUT	Right front channel output.(FADER adjust).
36	RR OUT	Right rear channel output.(FADER adjust).

■ TDA8561Q 051-2009-00

Outward Form



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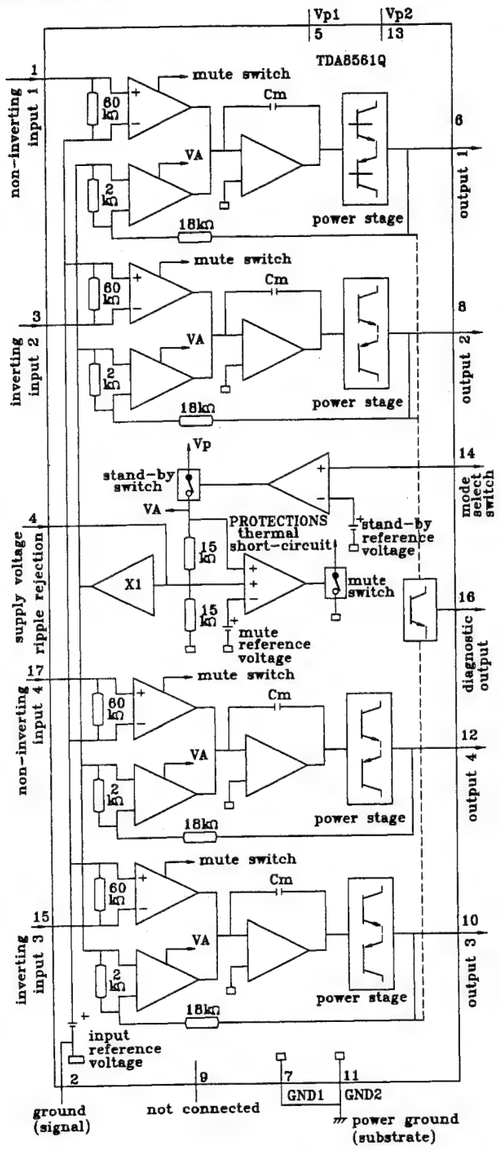
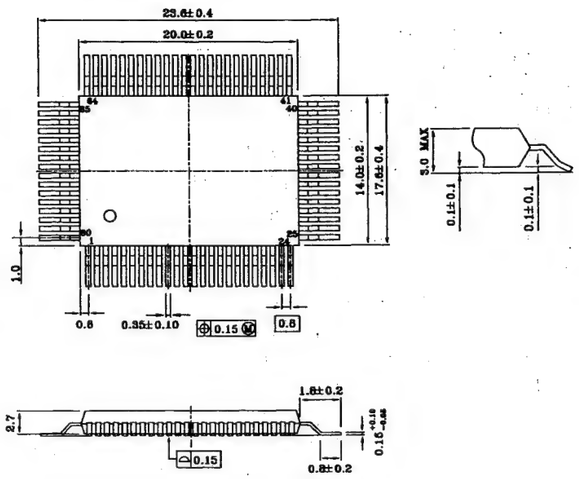


■ UPD17006AGF-622-3B9 052-1303-00

Outward Form



Key Matrix Table

KEY IN / KEY OUT	KI0 (52 pin)	KI1 (51 pin)	KI2 (50 pin)	KI3 (49 pin)
KO0 (44 pin)	D SW0	D SW1	D SW2	DSW3
KO1 (43 pin)	BAND AM	RADIO MONITOR	E VOL FADER	T MODE
KO2 (42 pin)	LOUD KEY	FF/REW		

: Diode SW

Diode SW

In the table below,"0" means the diode switch is OFF (open) and "1" does the diode switch is ON (short) .

Switch Name	Function
D SW0 D SW1	Select the initial setting of AS (Auto Store). D SW0 / D SW1 / Function 0 / 0 / Both FM1 and FM2 bands 0 / 1 1 / 0 / FM2 band only 1 / 1
D SW2 D SW3	Select the availabilities of the APC, Dolby and MTL functions. D SW0 / D SW1 / Function 0 / 0 / APC:OFF. DOLBY:OFF. MTL:OFF. 0 / 1 / APC:OFF. DOLBY:OFF. MTL:ON. 1 / 0 / APC:OFF. DOLBY:ON. MTL:ON. 1 / 1 / APC:ON. DOLBY:ON. MTL:ON.
BAND AM	Select the availabilities of the AM band. 0: AM band unavailable. 1: AM band available.
RADIO MONITOR	Select the availabilities of the radio monitoring function (reproducing radio during FF/REW). 0: Radio monitoring unavailable. 1: Radio monitoring available.
E VOL FADER	Select the availabilities of the fader function with the electronic volume. 0: Fader unavailable. 1: Fader available.
T MODE	Select the availabilities of the tuning mode function (auto and manual). 0: Tuning mode unavailable. 1: Tuning mode available.
LOUD KEY	Select the availabilities of the loudness control function. 0: Loudness available. 1: Loudness unavailable.
FF/REW	Select the functions of FF and REW 0: ◀◀ ▶▶ available. 1: ◀◀ ▶▶ unavailable.

Terminal Connection

Pin No.	Symbol	I/O	Function
01	ST IND	I	Pin for lighting "ST" LCD while the input level is "L" during FM station reception.
02	RDS IND	I	Pin for input of RDS station signal from the RDS decoder IC.
03	SK IND	I	Pin for input of SK (traffic information station) signal from the RDS decoder IC.
04	DK IND	I	Pin for input of DK (announcement) signal from the RDS decoder IC.
05	REMOCON IN	I	Pin for input from the 1-wire,voltage conversion type remote controller.
06	VSM	I	Pin used for signal (field strength) comparison during tracking of same programme.
07	FM IF	I	Pin for input of FM IF frequency counter signal.
08	AM IF	I	Pin for input of MW/LW IF frequency counter signal.
09	RDS START	I	Pin for input of start signal from the RDS decoder IC.
10	RDS DATA	I	Pin for input of RDS data from the RDS decoder IC synchronized with RDS CLK.
11	RDS CLK	I	Pin for input of clock from the RDS decoder IC.
12	RDS RES	0	Pin used as the reset flag of synchronizing software.
13	RDS MUTE	0	MW/LW "L" output terminal which outputs "L" for 1 sec when FM power is switched ON.
14	Vdd	–	Power pin.
15	AM OSC	I	Pin for input of MW/LW band VCO (receiving frequency + 10.71MHz).
16	FM OSC	I	Pin for input of FM band VCO (receiving frequency + 10.7MHz).
17	GND	–	Earth terminal.
18 19 20	EO EO AM EO FM	0	Pins for output of PLL error signals.
21	LW/MW FM	0	Pin for output of "H" during LW reception.
22	REM	0	Pin for system power control.
23	VOL CE	0	Pin for electronic volume control.
24	MUTE	0	Pin for system muting control (interlocked with electronic volume).
25	AM + B	0	Pin for MW/LW band power control.
26	FM + B	0	Pin for FM band power control.
27	LPF CONT	0	Pin for PLL low-pass filter control.
28	BEEP	0	Pin for output of pulse for generating beep sound.
29	B/U DET	I	Pin for detecting that the system back-up power is dropped.
30	Vdd	–	Power pin.
31	CE	I	Pin for input of Chip Enable signal.
32	MOTOR	0	Pin for cassette deck power control.
33	GND	–	Earth pin.
34 35	X OUT X IN	–	Pins for connection of X'tal oscillator.
36	NC	–	Not in use.
37	ACC IN	I	Pin for detecting the accessory power input from the car.
38 39	VOL L VOL R	I	Pins for input of electronic volume signals (phase comparison method).
40	BAND/ILL	I	Pin for input of BAND key signal.
41 \ 44	KO3 \ KO0	0	Pins for output of key scan signals.
45 \ 52	K17 \ K10	I	Pin for input of key scan signals (pins 45 to 52 are not in use).
53	LCD KEY REO	I	Pin for input of Key ON signal from the LCD driver.
54	PHONE INT	I	Telephone signal port. MUTE is output while this port is "H".
55	NC	–	Not in use.
56	SI	I	Serial data line to/from the LCD driver and electrontc volume.
57 58	SO SCK	0	Serial data line to/from the LCD driver and electronic volume.
59	REM OUT	0	STOP request signal for externally connected components.
60	REM IN	I	Operation signal from externally connected components.
61	GND	–	Earth pin.
62	LCD CS	0	Pin for output of LCD driver Chip Select signal.
63	NC	–	Not in use.
64	Vdd	–	Power pin.
65	LCD OE	0	Pin for LCD driver control.
66	ILLUMI	0	Two cycles of "H"⟷"L" are repeated when the BAND key is held for 2 sec. The initial status is "L". Because of the presence of the illumination line,"H" can be output even when Acc is OFF.
67 68	NC	–	Not in use.
69	R/T	0	Pin for output for switching between the radio mode (L) and tape mode (H).
70	DOLBY ON/OFF	0	In Tape mode,alternates "H" and "L" every time the switch is pressed.
71	APC ON/OFF	0	In tape mode with APC ON,outputs "H" during FW/REW.
72	MTL ON/OFF	0	In tape mode,alternates "H" and "L" every time the switch is pressed.
73	FF/REW	I	In case the radio monitoring is used, radio broadcasting is monitored while this port is "L" with the cassette pack in.
74	PACK IN	I	L: Cassette pack present (tape mode). H: Cassette pack absent (radio mode).
75	FOW/REV	I	Cassette tape transport direction. (In tape mode,outputs MUTE when the port status changes.)
76	FM SD	I	Pin for station detection during tracking of same programme while auto tuning (Seek,AS,PS) is activated.
77	DX/LO	0	Pin used during Seek and AS (usually "L").
78	RDS SD	0	Pin used during Seek,AS and auto tracking in FM mode (usually "L").
79	IF REQ	0	Outputs "L" when IF count is required during Seek,AS and PS (usually "H").
80	IF MUTE	0	Outputs signal during auto tracking operation.

■ PART LIST:

MAIN P.W.B.:

Ref. No.	Order No.	Description	Q'ty
IC401	051-0272-00	IC LA3161	1
IC601	051-0410-05	IC TC4052BF	1
IC502	051-0556-91	IC NJM2058M	1
IC703	051-0869-55	IC NJM2103M	1
IC501	051-5000-00	IC LC7538NM	1
IC702	051-1375-35	IC NM93C46TM	1
IC301	051-1819-00	IC SAA6579	1
IC503	051-2009-00	IC TDA8561Q	1
IC701	052-1303-00	IC μPD17006AGF-622-0	1
VR101	012-9001-06	Semi Fixed VR TB069A-0C 5KΩ	1
L701	009-9002-00	CHOKE IMH EI=19mm	1
L103	010-9000-53	COIL 6R8	1
L101	010-9005-00	COIL 30μH	1
L102	010-9009-50	COIL R15M	1
CN101	074-1058-00	Connector CAM-A45(D41-A341)	1
CN102	076-9000-03	Connector 53014-0310 Molex	1
CN103	076-9000-05	Connector 53014-0510 Molex	1
X701	061-9000-00	X-TAL OSC 4.5MHz 20PPM	1
X301	061-9001-00	X-TAL OSC 4.332MHz 20PPM	1
SUP101	060-0122-10	Diode DSP-201N-S00B	1
D722	001-0346-33	Zener Diode MTZ 5.6 JC	1
D720	001-0346-36	Zener Diode MTZ 6.2 JC	1
D724	001-0346-44	Zener Diode MTZ 8.2 JB	1
D201,717,718	001-0346-48	Zener Diode MTZ 9.1 JC	3
D502	001-0346-23	Zener Diode MTZ 4.3 JB	1
D714	001-2004-90	Diode 1N4003	1
D712	001-0188-01	Diode 1S1885A	1
D101,102,105,106 501,601,705,707 709,710,711,713 719,723	001-0352-90	Diode 1SS176	14
Q704,714,715,717	190-1048-00	Transistor 2SA1048	4
Q706	190-1548-00	Transistor 2SA1548	1
Q204,205	192-3113-00	Transistor 2SC3113	2
Q705,708,709,712 713	193-1858-00	Transistor 2SD1858	5
Q106,722	193-1450-00	Transistor 2SD1450 RST	2
Q101,102,105,203 208,601,716,718 719,721	125-2003-93	Transistor RN1203	10
Q201,202	192-2458-28	Transistor 2SC2458 GR	2
Q602,603,707,711	192-2458-00	Transistor 2SC2458	4
Q720	125-0003-93	Transistor RN2203	1
Q710	191-1243-00	Transistor 2SB1243	1
R753	031-0111-29	Fuse-R FRN 25S 1.6Ω JP	1
R752	111-4711-88	Carbon Film-R 1/2WS 470Ω JP	1
R713,714,747,748	111-1091-98	Carbon Film-R 1/4WSS 1Ω JP	4
R404,405	111-3301-98	Carbon Film-R 1/4WSS 33Ω JP	2
R706	111-1011-98	Carbon Film-R 1/4WSS 100Ω JP	1
R715	111-2711-98	Carbon Film-R 1/4WSS 270Ω JP	1
R502	111-3311-98	Carbon Film-R 1/4WSS 330Ω JP	1

Ref. No.	Order No.	Description	Q'ty
R205,760	111-4711-98	Carbon Film-R 1/4WSS 470Ω JP	2
R203,207,515,516 517,742,746	111-1021-98	Carbon Film-R 1/4WSS 1KΩ JP	7
R102,114,115,202 204,301,408,410 709,712,732	111-2221-98	Carbon Film-R 1/4WSS 2.2KΩ JP	11
R403,406 507~514	111-4721-98	Carbon Film-R 1/4WSS 4.7KΩ JP	10
R201,716,741	111-5621-98	Carbon Film-R 1/4WSS 5.6KΩ JP	3
R206	111-6821-98	Carbon Film-R 1/4WSS 6.8KΩ JP	1
R127,707,708,710 711,717,719,720 721,733,745,749 750,751,754,755 756,757,759	111-1031-98	Carbon Film-R 1/4WSS 10KΩ JP	19
R731	111-1831-98	Carbon Film-R 1/4WSS 18KΩ JP	1
R603,743,744,758	111-2231-98	Carbon Film-R 1/4WSS 22KΩ JP	4
R738	111-3931-98	Carbon Film-R 1/4WSS 39KΩ JP	1
R401,402 503~506,737	111-4731-98	Carbon Film-R 1/4WSS 47KΩ JP	7
R705,730	111-1041-98	Carbon Film-R 1/4WSS 100KΩ JP	2
R407,409,740,761	111-1241-98	Carbon Film-R 1/4WSS 120KΩ JP	4
R734,739	111-1541-98	Carbon Film-R 1/4WSS 150KΩ JP	2
R736	111-1051-98	Carbon Film-R 1/4WSS 1MΩ JP	1
R725	116-1031-15	Chip-R 1/4W 10KΩ J	1
R735	116-4731-15	Chip-R 1/4W 47KΩ J	1
R101	116-6831-15	Chip-R 1/4W 68KΩ J	1
R210,608,762	117-1021-15	Chip-R 1/10W 1KΩ J	3
R113,114	117-2721-15	Chip-R 1/10W 2.7KΩ J	2
R702	117-3321-15	Chip-R 1/10W 3.3KΩ J	1
R606,607	117-5621-15	Chip-R 1/10W 5.6KΩ J	2
R116	117-8221-15	Chip-R 1/10W 8.2KΩ J	1
R718	117-1031-15	Chip-R 1/10W 10K Ω J	1
R601,602	117-2231-15	Chip-R 1/10W 22K Ω J	2
R109,212	117-4731-15	Chip-R 1/10W 47K Ω J	2
R111	117-6231-15	Chip-R 1/10W 62K Ω J	1
R604,605	117-6831-15	Chip-R 1/10W 68KΩ J	2
R107,108	117-1041-15	Chip-R 1/10W 100KΩ J	2
R106	117-1241-15	Chip-R 1/10W 120KΩ J	1
R105	117-1841-15	Chip-R 1/10W 180KΩ J	1
C301	160-3312-75	Ceramic-C 50V 330PF K B	1
C304	160-5612-75	Ceramic-C 50V 560PF K B	1
C401,402	160-6812-75	Ceramic-C 50V 680PF K B	2
C103,705	171-1023-76	Ceramic-C 25V 1000PF M SR	2
C108,112,113,703 719	171-2233-76	Ceramic-C 25V 0.022μF M SR	5
C307	043-0039-92	Ceramic-C 16V 0.1μF M SR	1
C407,408	173-2731-19	Polyester-C 50V 0.027μF J	2
C206	173-3932-19	Polyester-C 50V 0.039μF K	1
C519	173-1042-19	Polyester-C 50V 0.1μF K	1
C706,707	176-3301-50	Chip-C 50V 33PF J CH	2
C306	176-4701-50	Chip-C 50V 47PF J CH	1
C305	176-8201-50	Chip-C 50V 82PF J CH	1
C701,702	176-1011-50	Chip-C 50V 100PF J CH	2

MAIN P.W.B.:

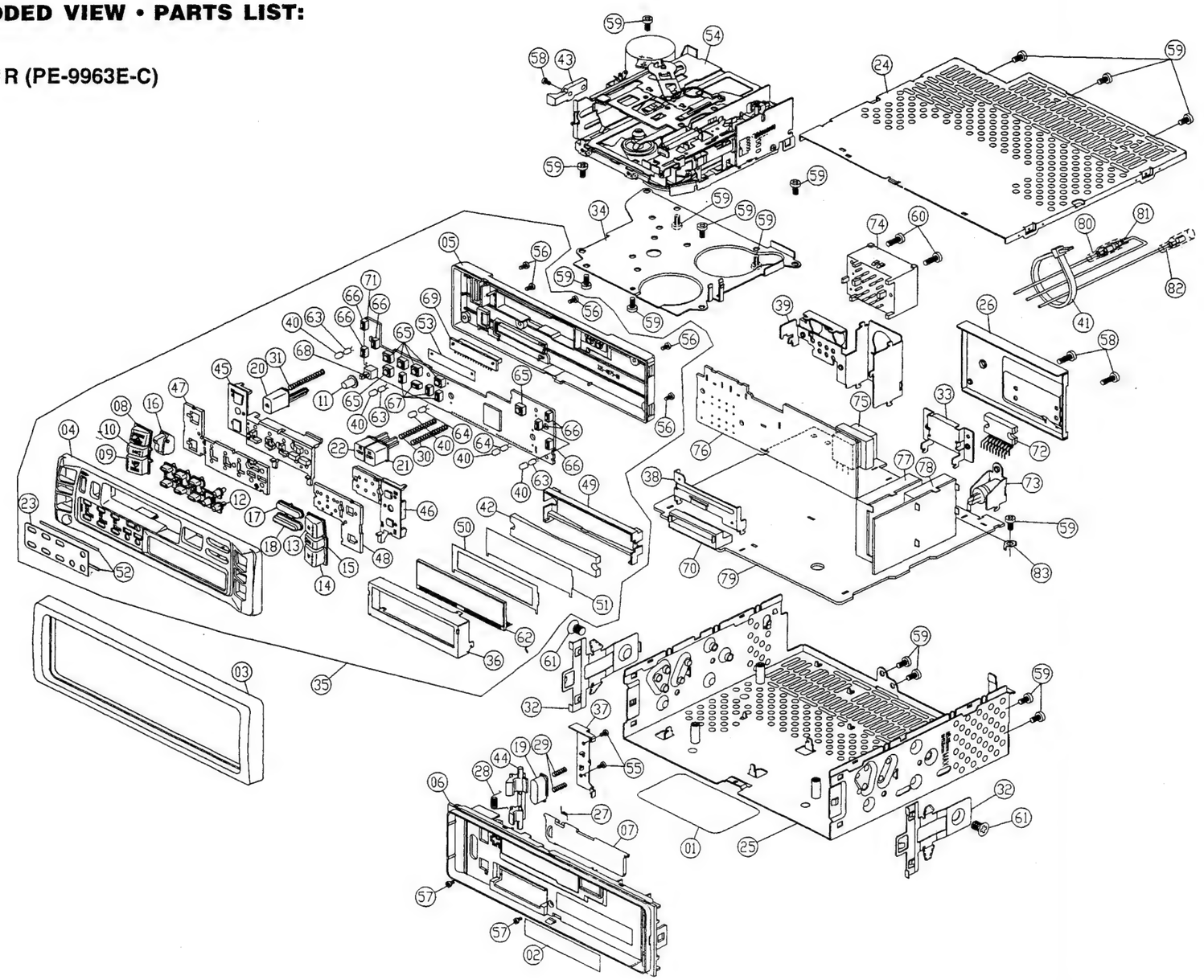
Ref. No.	Order No.	Description	Q'ty
C102,104,105,114 115,513,515,517 518,712	178-1022-55	Chip-C 50V 1000PF K Y5P	10
C505,510	178-3322-55	Chip-C 50V 3300PF K Y5P	2
C502,507	178-4722-55	Chip-C 50V 4700PF K Y5P	2
C207	178-5622-55	Chip-C 50V 5600PF K Y5P	1
C713	178-1032-55	Chip-C 50V 0.01μF K Y5P	1
C106,107	178-1532-55	Chip-C 50V 0.015μF K Y5P	2
C503,508	178-2235-56	Chip-C 25V 0.022μF Z Y5V	2
C202	178-3332-55	Chip-C 25V 0.033μF K Y5P	1
C711	178-1045-56	Chip-C 25V 0.1μF Z Y5V	1
C403,404	180-1053-65	Electrolytic-C 50V 1μF M	2
C302,512,514,516 527,716,717	180-2253-65	Electrolytic-C 50V 2.2μF M	7
C603,604	180-4753-63	Electrolytic-C 50V 4.7μF M	2
C303,409,710,714	184-4763-29	Electrolytic-C 10V 47μF M	4
C101,405,406,718	184-1073-29	Electrolytic-C 10V 100μF M RB	4
C521	184-1073-39	Electrolytic-C 16V 100μF M RB	1
C709	184-2273-29	Electrolytic-C 10V 220μF M RB	1
C605	182-1043-63	SS Electrolytic-C 50V 0.1μF M SSB	1
C506,511	182-2243-63	SS Electrolytic-C 50V 0.22μF M RB	2
C203	182-1053-63	SS Electrolytic-C 50V 1μF M RB	1
C208,504,509,601 602	182-2253-63	SS Electrolytic-C 50V 2.2μF M RB	5
C704	182-3363-23	SS Electrolytic-C 10V 33μF M RB	1
C501	182-1073-23	SS Electrolytic-C 10V 100μF M RB	1
C520	184-1083-32	Electrolytic-C 16V 1000μF M	1
C522	184-2283-22	Electrolytic-C 10V 2200μF M	1
C204	182- -22	SS Electrolytic-C 10V 100μF M	1

SW P.W.B.

Ref. No.	Order No.	Description	Q'ty
IC101	051-6001-00	IC μPD16431GC-7ET	1
D101~104	001-0352-90	Diode 1SS176	4
S106,109,113,114	013-3812-01	Tact SW SKHLAJ	4
S116	013-3849-00	Tact SW ESB-64805-N	1
S105,107,108,111 112,115	013-6002-50	Tact SW SKHVBC3430-CR	6
S101~104,107 110	013-3812-11	Tact SW SKQCAC (260g)	6
PL103,104,105	017-9000-00	Pilot Lamp 14V 40mA	3
PL101,102	017-9001-00	Pilot Lamp 8V 68mA	2
C102	178-4735-56	Chip-C 25V 0.047μF Y5V	1
R101,103	117-1031-15	Chip-R 1/10W 10KΩ J	2
R102	117-1041-15	Chip-R 1/10W 100KΩ J	1

■ EXPLODED VIEW • PARTS LIST:

• ARX4171R (PE-9963E-C)



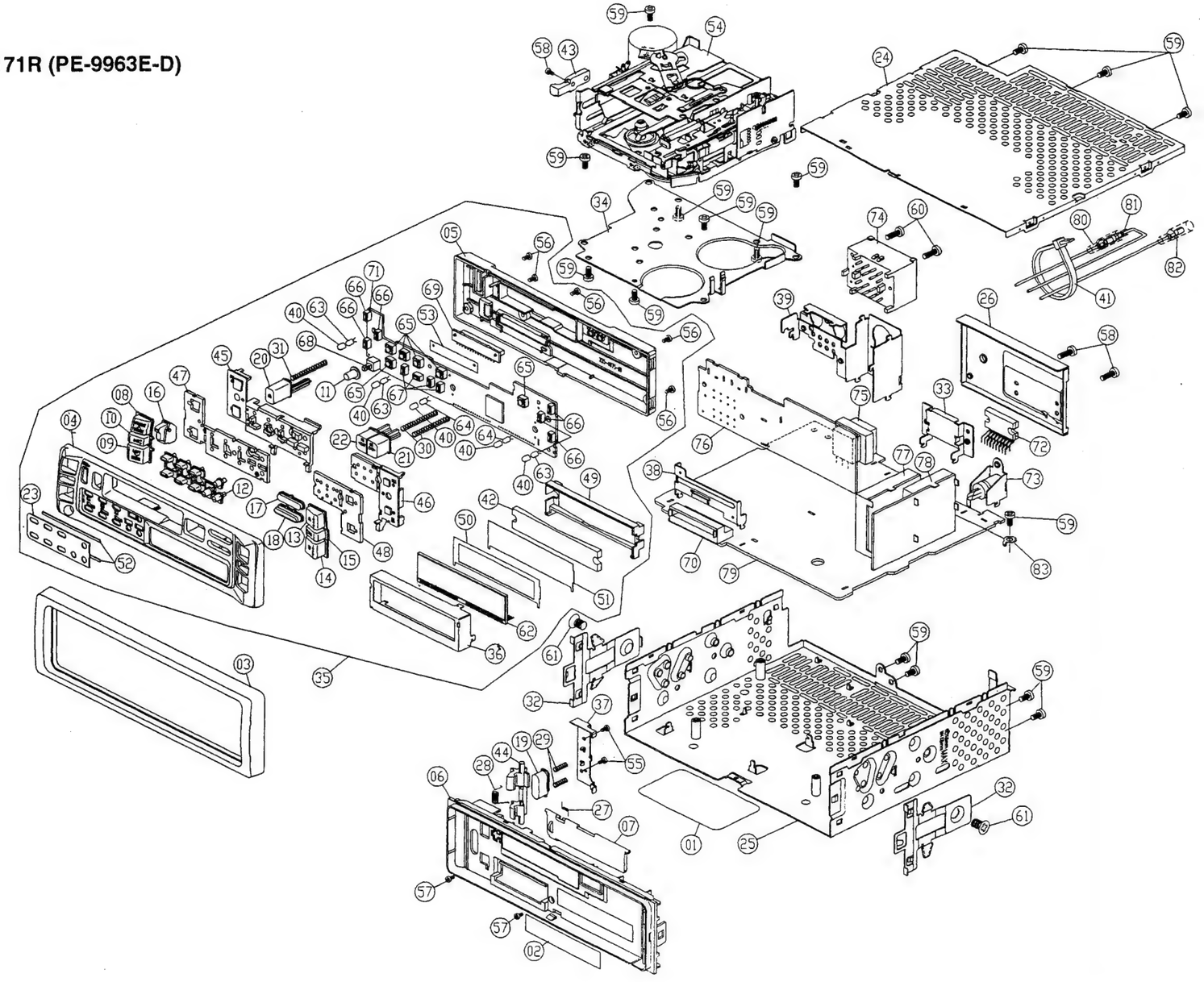
Ref. No	Order No.	Description	Q'ty
01	286-8292-00	Set Plate	1
02	291-0067-00	Label (SECURITY)	1
03	370-5516-00	Trim Escutcheon	1
04	370-9015-08	Escutcheon (F)	1
05	335-4875-00	Rear Cover	1
06	370-9016-00	Out-Escutcheon	1
07	320-0526-07	Dustproof Cover	1
08	382-3797-00	Button (FR)	1
09	382-3795-00	Button (LR)	1
10	382-3796-00	Button (AM)	1
11	382-7693-00	Button (POWER)	1
12	382-7696-00	Button Ass'y	1

Ref. No	Order No.	Description	Q'ty
13	382-3789-00	Button (UP)	1
14	382-3791-00	Button (DOWN)	1
15	382-3790-00	Button (TM)	1
16	382-3798-00	Button (RELEASE)	1
17	382-7694-00	Trim Button	1
18	382-3811-00	Button (PS/AS)	1
19	382-7681-00	Button (PUSH-OUT)	1
20	382-7697-00	Button (EJE)	1
21	382-7699-00	Button (FF)	1
22	382-7700-00	Button (REW)	1
23	378-0131-01	Badge	1
24	310-1571-00	Upper Case	1

Ref. No	Order No.	Description	Q'ty
25	311-1640-02	Lower Case	1
26	313-1615-00	Heat Sink	1
27	750-3169-00	Spring (DOOR)	1
28	750-3170-00	Spring (HOOK)	1
29	750-3167-00	Spring (PUSH-OUT)	2
30	750-3138-00	Spring (FF/REW)	2
31	750-3171-00	Spring (EJE)	1
32	750-3137-00	Spring	2
33	331-0614-00	IC Holder	1
34	331-0604-00	Mecha.Bracket (TOM-2)	1
35	45-9963-AA	DCP Ass'y	1
36	331-0608-00	LCD Holder	1

Ref. No	Order No.	Description	Q'ty
37	331-0615-00	Hook Holder	1
38	331-0605-00	DCP Connector Holder	1
39	331-0610-00	Connector Holder (ISO)	1
40	345-4441-65	Lamp Cap(A)	5
41	335-0833-01	Lead Holder	1
42	335-4881-00	LCD Illumination Plate	1
43	335-4877-00	Spacer (EJE)	1
44	335-4876-00	Hook	1
45	335-4879-00	Illumination Plate (L)	1
46	335-4880-00	Illumination Plate (R)	1
47	345-7639-00	Sponge (L)	1
48	345-7640-00	Sponge (R)	1
49	335-4887-00	LCD Illumination Holder	1
50	347-5103-00	Film (LCD) (BLACK)	1
51	347-5102-00	Film (LCD)	1
52	347-5104-00	Double Face	2
53	347-5101-00	Film (DCP CONN.)	1
54	930-0723-80	Tape Mechanism	1
55	702-2005-80	TAP Screw	2
56	702-2008-19	TAP Screw	5
57	714-2006-89	Machine Screw	2
58	714-2604-80	Machine Screw	3
59	714-3005-80	Machine Screw	16
60	714-2610-10	Machine Screw	2
61	714-5008-40	Machine Screw	2
62	379-9004-00	LCD (NEGATIVE)	1
63	017-9000-00	Pilot Lamp (14V)	3
64	017-9001-00	Pilot Lamp (8V)	2
65	013-6002-50	Tact Swith	6
66	013-3812-11	Tact Swith	6
67	013-3812-01	Tact Swith	4
68	013-3849-00	Push Swith	1
69	076-0481-00	DCP Connector (M)	1
70	074-1058-00	DCP Connector (F)	1
71	039-0426-00	Swith P.W.B	1
72	051-2009-00	Power IC	1
73	092-9000-01	ANT.Recert	1
74	074-1078-10	Connector (ISO)	1
75	009-9000-00	Chock	1
76	039-0421-11	P.W.B (ISO)	1
77	80-1603-AI	Tuner (AM)	1
78	80-1777-AI	Tuner (FM)	1
79	53-9963-AQ	Main P.W.B	1
80	850-6661-00	A-lead (YELLOW)	1
81	850-6663-00	A-lead (YELLOW/RED)	1
82	850-6662-00	A-lead (RED)	1
83	331-0643-00	Earth Plate	1

• **ARX4171R (PE-9963E-D)**



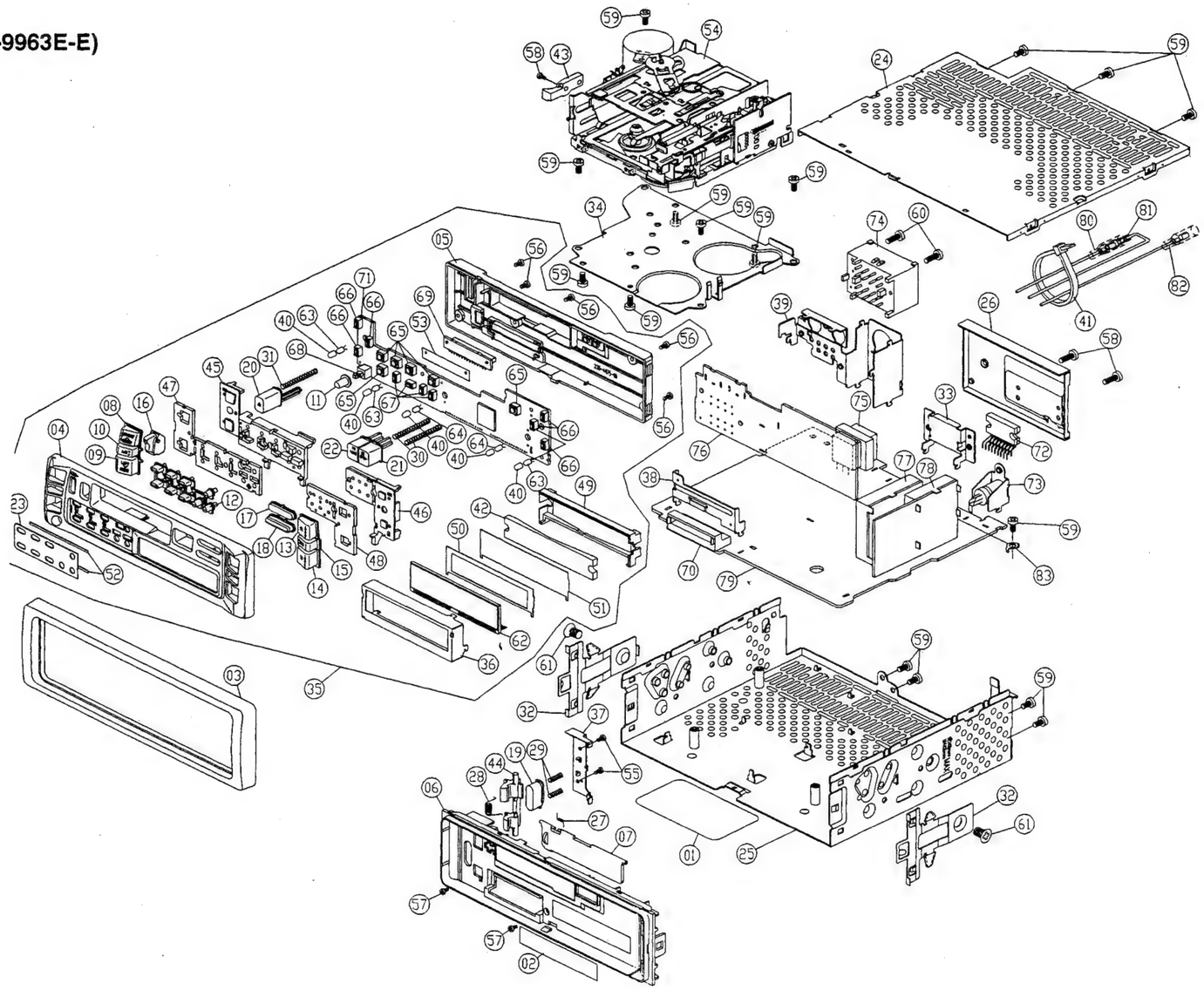
Ref. No	Order No.	Description	Q'ty
01	286-8292-00	Set Plate	1
02	291-0067-00	Label (SECURITY)	1
03	370-5516-00	Trim Escutcheon	1
04	370-9015-08	Escutcheon (F)	1
05	335-4875-00	Rear Cover	1
06	370-9016-00	Out-Escutcheon	1
07	320-0526-07	Dustproof Cover	1
08	382-3797-00	Button (FR)	1
09	382-3795-00	Button (LR)	1
10	382-3796-00	Button (AM)	1
11	382-7693-00	Button (POWER)	1
12	382-7696-00	Button Ass'y	1

Ref. No	Order No.	Description	Q'ty
13	382-3789-00	Button (UP)	1
14	382-3791-00	Button (DOWN)	1
15	382-3790-00	Button (TM)	1
16	382-3798-00	Button (RELEASE)	1
17	382-7694-00	Trim Button	1
18	382-3811-00	Button (PS/AS)	1
19	382-7681-00	Button (PUSH-OUT)	1
20	382-7697-00	Button (EJE)	1
21	382-7699-00	Button (FF)	1
22	382-7700-00	Button (REW)	1
23	378-0131-01	Badge	1
24	310-1571-00	Upper Case	1

Ref. No	Order No.	Description	Q'ty
25	311-1640-02	Lower Case	1
26	313-1615-00	Heat Sink	1
27	750-3169-00	Spring (DOOR)	1
28	750-3170-00	Spring (HOOK)	1
29	750-3167-00	Spring (PUSH-OUT)	2
30	750-3138-00	Spring (FF/REW)	2
31	750-3171-00	Spring (EJE)	1
32	750-3137-00	Spring	2
33	331-0614-00	IC Holder	1
34	331-0604-00	Mecha.Bracket (TOM-2)	1
35	45-9963-AA	DCP Ass'y	1
36	331-0608-00	LCD Holder	1

Ref. No	Order No.	Description	Q'ty
37	331-0615-00	Hook Holder	1
38	331-0605-00	DCP Connector Holder	1
39	331-0610-00	Connector Holder (ISO)	1
40	345-4441-65	Lamp Cap(G)	5
41	335-0833-01	Lead Holder	1
42	335-4881-00	LCD Illumination Plate	1
43	335-4877-00	Spacer (EJE)	1
44	335-4876-00	Hook	1
45	335-4879-00	Illumination Plate (L)	1
46	335-4880-00	Illumination Plate (R)	1
47	345-7639-00	Sponge (L)	1
48	345-7640-00	Sponge (R)	1
49	335-4887-00	LCD Illumination Holder	1
50	347-5103-00	Film (LCD) (BLACK)	1
51	347-5102-00	Film (LCD)	1
52	347-5104-00	Double Face	2
53	347-5101-00	Film (DCP CONN.)	1
54	930-0723-80	Tape Mechanism	1
55	702-2005-80	TAP Screw	2
56	702-2008-19	TAP Screw	5
57	714-2006-89	Machine Screw	2
58	714-2604-80	Machine Screw	3
59	714-3005-80	Machine Screw	16
60	714-2610-10	Machine Screw	2
61	714-5008-40	Machine Screw	2
62	379-9004-00	LCD (NEGATIVE)	1
63	017-9000-00	Pilot Lamp (14V)	3
64	017-9001-00	Pilot Lamp (8V)	2
65	013-6002-50	Tact Swith	6
66	013-3812-11	Tact Swith	6
67	013-3812-01	Tact Swith	4
68	013-3849-00	Push Swith	1
69	076-0481-00	DCP Connector (M)	1
70	074-1058-00	DCP Connector (F)	1
71	039-0426-00	Swith P.W.B	1
72	051-2009-00	Power IC	1
73	092-9000-01	ANT.Recert	1
74	074-1078-10	Connector (ISO)	1
75	009-9000-00	Chock	1
76	039-0421-11	P.W.B (ISO)	1
77	80-1603-AI	Tuner (AM)	1
78	80-1777-AI	Tuner (FM)	1
79	53-9963-AQ	Main P.W.B	1
80	850-6661-00	A-lead (YELLOW)	1
81	850-6663-00	A-lead (YELLOW/RED)	1
82	850-6662-00	A-lead (RED)	1
83	331-0643-00	Earth Plate	1

• **CR705R (PE-9963E-E)**



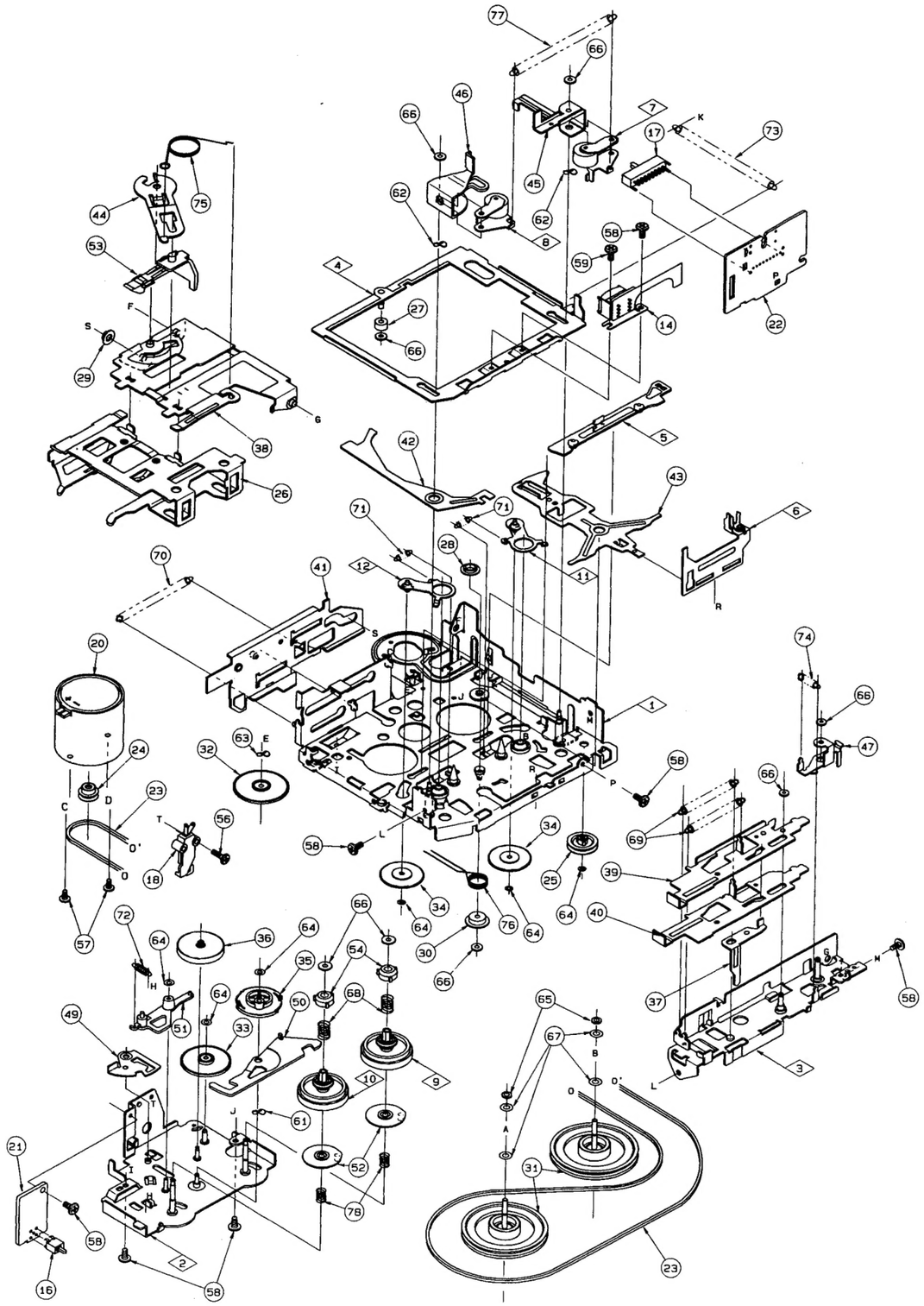
Ref. No	Order No.	Description	Q'ty
01	286-8398-00	Set Plate	1
02	291-0067-00	Label (SECURITY)	1
03	370-5516-00	Trim Escutcheon	1
04	370-9015-09	Escutcheon (F)	1
05	335-4875-00	Rear Cover	1
06	370-9016-00	Out-Escutcheon	1
07	320-0526-07	Dustproof Cover	1
08	382-3797-00	Button (FR)	1
09	382-3795-00	Button (LR)	1
10	382-3796-00	Button (AM)	1
11	382-7693-00	Button (POWER)	1
12	382-7696-00	Button Ass'y	1

Ref. No	Order No.	Description	Q'ty
13	382-3789-00	Button (UP)	1
14	382-3791-00	Button (DOWN)	1
15	382-3790-00	Button (TM)	1
16	382-3798-00	Button (RELEASE)	1
17	382-7694-00	Trim Button	1
18	382-3811-00	Button (PS/AS)	1
19	382-7681-00	Button (PUSH-OUT)	1
20	382-7697-00	Button (EJE)	1
21	382-7699-00	Button (FF)	1
22	382-7700-00	Button (REW)	1
23	378-0131-01	Badge	1
24	310-1571-00	Upper Case	1

Ref. No	Order No.	Description	Q'ty
25	311-1640-02	Lower Case	1
26	313-1615-00	Heat Sink	1
27	750-3169-00	Spring (DOOR)	1
28	750-3170-00	Spring (HOOK)	1
29	750-3167-00	Spring (PUSH-OUT)	2
30	750-3138-00	Spring (FF/REW)	2
31	750-3171-00	Spring (EJE)	1
32	750-3137-00	Spring	2
33	331-0614-00	IC Holder	1
34	331-0604-00	Mecha.Bracket (TOM-2)	1
35	45-9963-CA	DCP Ass'y	1
36	331-0608-00	LCD Holder	1

Ref. No	Order No.	Description	Q'ty
37	331-0615-00	Hook Holder	1
38	331-0605-00	DCP Connector Holder	1
39	331-0610-00	Connector Holder (ISO)	1
40	345-4441-65	Lamp Cap (A)	5
41	335-0833-01	Lead Holder	1
42	335-4881-00	LCD Illumination Plate	1
43	335-4877-00	Spacer (EJE)	1
44	335-4876-00	Hook	1
45	335-4879-00	Illumination Plate (L)	1
46	335-4880-00	Illumination Plate (R)	1
47	345-7639-00	Sponge (L)	1
48	345-7640-00	Sponge (R)	1
49	335-4887-00	LCD Illumination Holder	1
50	347-5103-00	Film (LCD) (BLACK)	1
51	347-5102-00	Film (LCD)	1
52	347-5104-00	Double Face	2
53	347-5101-00	Film (DCP CONN.)	1
54	930-0723-80	Tape Mechanism	1
55	702-2005-80	TAP Screw	2
56	702-2008-19	TAP Screw	5
57	714-2006-89	Machine Screw	2
58	714-2604-80	Machine Screw	3
59	714-3005-80	Machine Screw	16
60	714-2610-10	Machine Screw	2
61	714-5008-40	Machine Screw	2
62	379-9004-00	LCD (NEGATIVE)	1
63	017-9000-00	Pilot Lamp (14V)	3
64	017-9001-00	Pilot Lamp (8V)	2
65	013-6002-50	Tact Swith	6
66	013-3812-11	Tact Swith	6
67	013-3812-01	Tact Swith	4
68	013-3849-00	Push Swith	1
69	076-0481-00	DCP Connector (M)	1
70	074-1058-00	DCP Connector (F)	1
71	039-0426-00	Swith P.W.B	1
72	051-2009-00	Power IC	1
73	092-9000-01	ANT. Recert	1
74	074-1078-10	Connector (ISO)	1
75	009-9000-00	Chock	1
76	039-0421-11	P.W.B (ISO)	1
77	80-1603-AI	Tuner (AM)	1
78	80-1777-AI	Tuner (FM)	1
79	53-9963-AQ	Main P.W.B	1
80	850-6661-00	A-lead (YELLOW)	1
81	850-6663-00	A-lead (YELLOW/RED)	1
82	850-6662-00	A-lead (RED)	1
83	331-0643-00	Earth Plate	1

■ EXPLODED VIEW • PARTS LIST:



• Tape mechanism section
930-0723-80

Ref. No	Order No.	Description	Q'ty
01	960-4180-05	Deck-Assy	1
02	960-4181-06	Bottom-Assy	1
03	960-4182-03	Frame-Assy	1
04	960-4184-03	Head-Assy	1
05	960-4186-02	FF-Rew-P-Assy	
06	960-4187-01	Head-SW-Assy	1
07	960-4188-03	Roller-Assy F	1
08	960-4189-03	Roller-Assy R	1
09	960-4190-07	Reel-Assy F	1
10	960-4191-07	Reel-Assy R	1
11	960-4192-02	Idler-Assy F	1
12	960-4193-02	Idler-Assy R	1
13	– –		
14	011-0320-00 011-0305-03	Head	1
15	– –		
16	013-3906-00	Switch	1
17	013-3922-00	Switch	1
18	013-3924-00	Switch	1
19	– –		
20	020-0402-00	Dc Motor	1
21	099-9126-00	PWB	1
22	099-9669-00	PWB	1
23	602-0115-00	Belt	1
24	603-0112-01	Motor Pulley	1
25	604-0042-01	Tension Pulley	1
26	606-0100-05	Pack Guide	1
27	610-0333-01	Head Roller A	1
28	610-0334-01	Head Roller B	1
29	610-0335-02	Eject Roller	1
30	610-0336-01	SP Roller	1
31	611-0090-03	Flywheel	2
32	613-0272-10	Gear A	1
33	613-0273-02	Gear B	1
34	613-0274-02	Idler Gear	2
35	613-0275-03	Change Gear	1
36	613-0277-02	Check Gear	1
37	630-2488-02	Select Plate	1
38	630-2494-07	Guide Arm	1
39	630-2715-00	FF Lever-DCP	1
40	630-2516-00	Rew Lever-DCP	1
41	630-2498-10	Eject Lever-C	1
42	630-2499-01	Change Lever	1
43	630-2501-02	Change Plate	1
44	630-2502-05	Swing Arm	1
45	630-2505-02	FF-Rew Link	1
46	630-2506-04	Reliese Link	1
47	630-2507-04	Lock Link	1
48	– –		
49	630-2529-01	Mute Plate	1
50	631-1958-05	Check Link	1
51	631-1959-01	Change Link	1
52	631-1961-03	Check Plate	2
53	631-1963-04	Pack Stopper	1

Ref. No	Order No.	Description	Q'ty
54	631-1967-00	Slide Bush	2
55	– –		
56	714-2008-81	Machine Screw	1
57	716-0484-02	Special Screw	2
58	716-1471-00	S-Tyte 2-3	7
59	716-1473-01	Head Screw	1
60	– –		
61	745-0752-00	Plate Spring	1
62	745-0756-00	Spring Washer	2
63	746-0712-03	Special Washer	1
64	746-0724-00	Special Washer	6
65	746-0869-00	Special Washer	2
66	746-0768-00	Special Washer	8
67	746-0839-00	Capstain Washer	4
68	750-2564-01	Slide Spring	2
69	750-2904-02	FF-Rew Spring	2
70	750-2905-02	Eject Spring	1
71	750-2906-00	Idler Spring	2
72	750-2907-03	Change-L-Spring	1
73	750-2908-02	Head Spring	1
74	750-2909-04	Lock Spring	1
75	750-2910-03	Slot Spring	1
76	750-2911-01	Holding Spring	1
77	750-2912-01	Pintch Spring	1
78	750-2919-03	Check Spring-R	2
79	– –		
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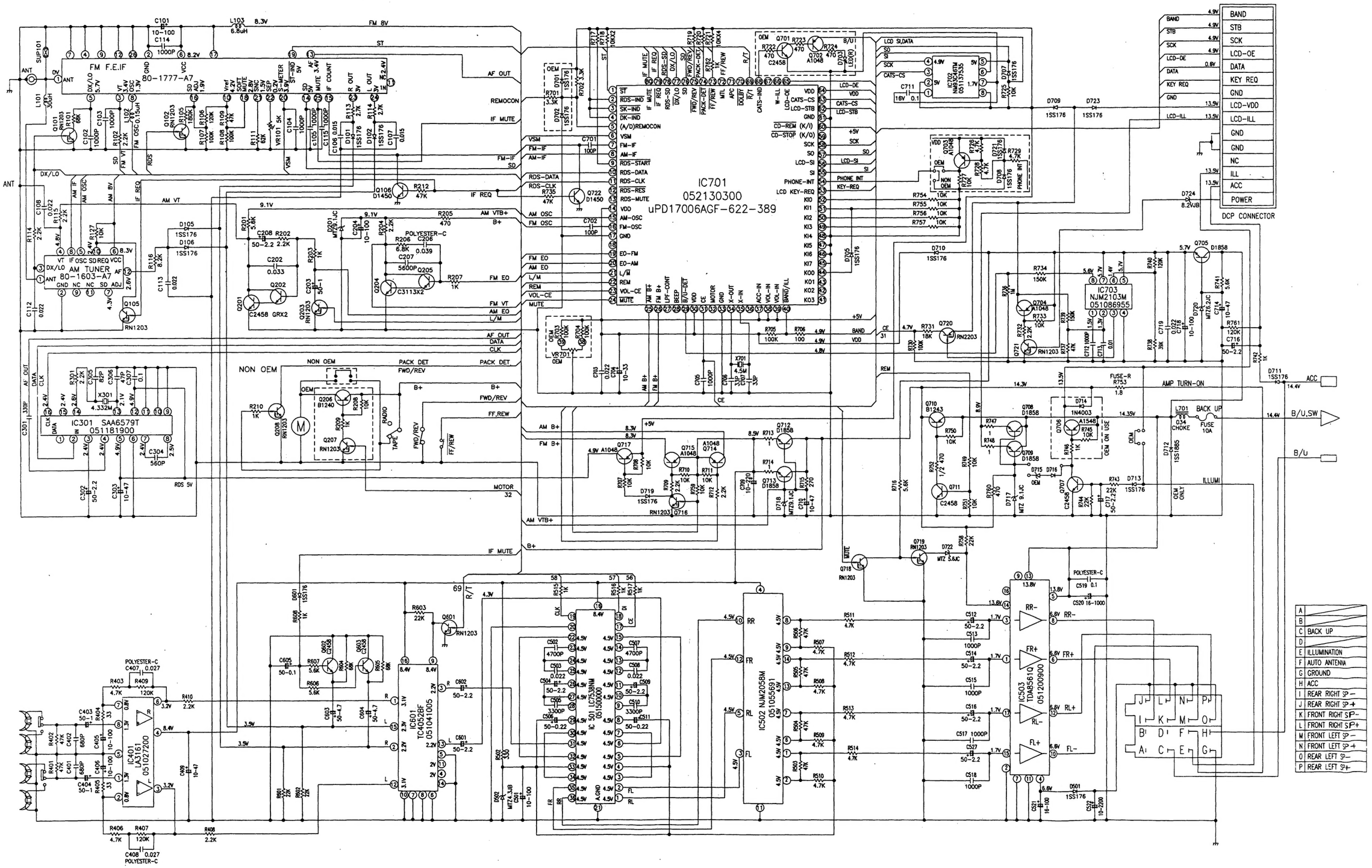
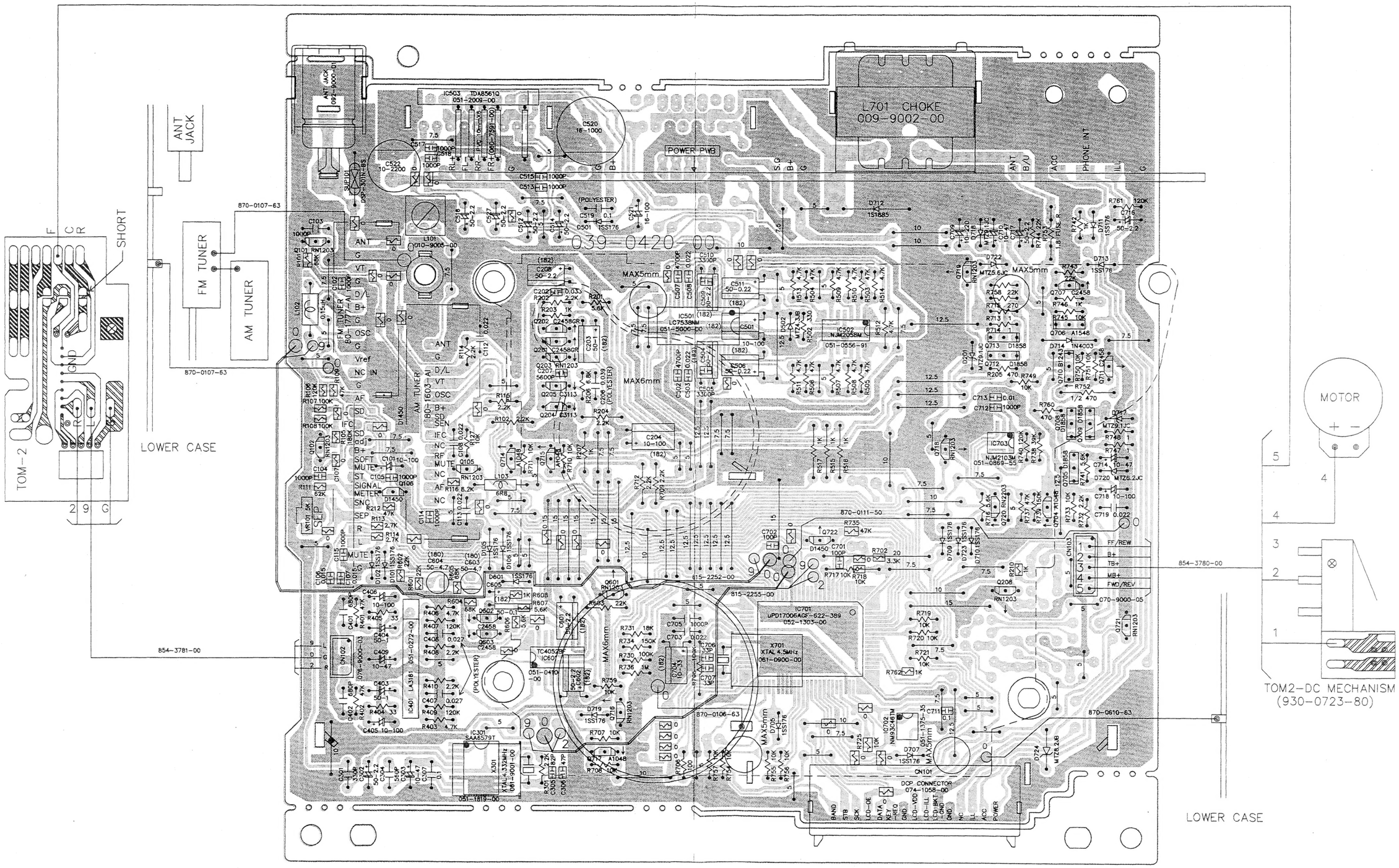
■ CIRCUIT DIAGRAM:



■ PRINTED WIRING BOARD:



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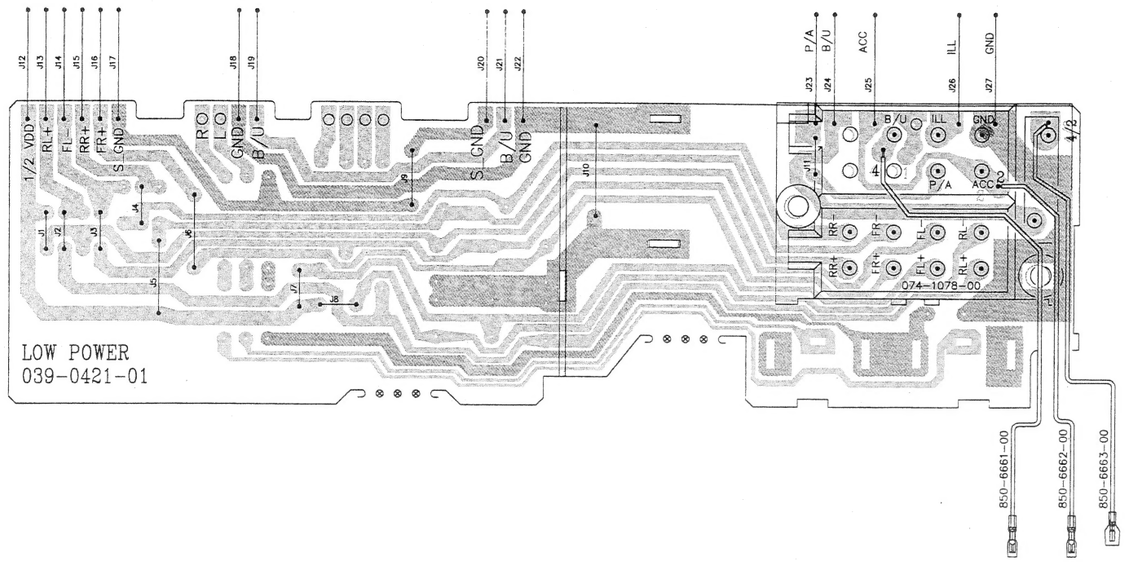

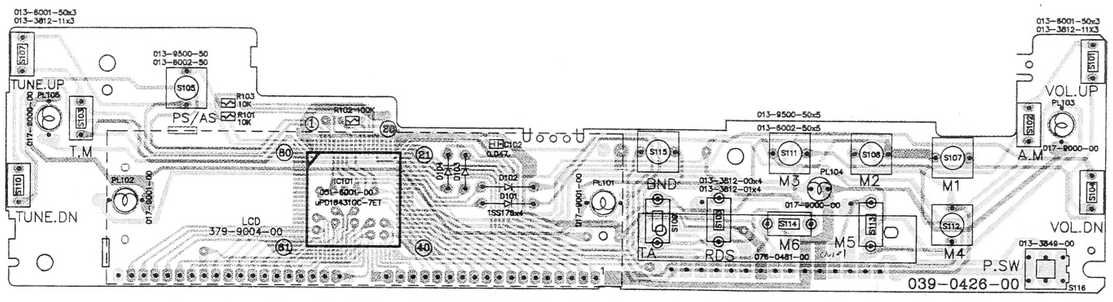
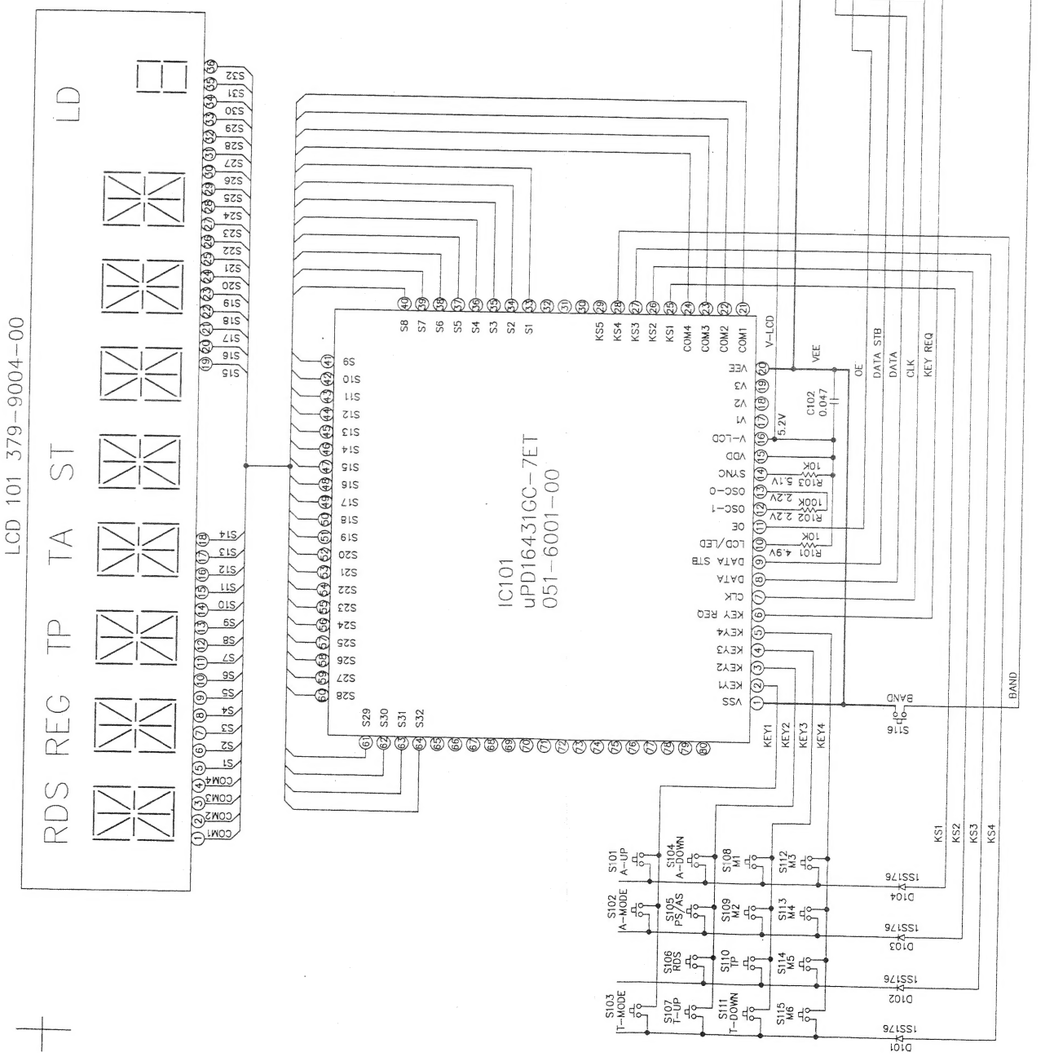
■ CIRCUIT DIAGRAM: